## RECORD COPY

PRO 1. 52494 CAT. WORKING COPY\_\_\_\_ W05068 REPORT COVER PAGE ..... 1 CASE NARRATIVE ..... 5 SAMPLE RESULTS SUMMARY..... 11 DATA REVIEW CHECKLIST ..... 59 CHAIN OF CUSTODIES..... 93 IRF ...... 116 SAMPLE PREP ANAYLSIS SHEETS..... 119 ICOC ..... 148 TOTAL # PAGES IN DOCUMENT ..... 159

JAN 15 2007 DL STEWART 160 pages

# **Analytical Data Package Prepared For**

# **Pacific Northwest National Lab**

Radiochemical Analysis By

# STL Richland STLRL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains \_\_\_\_\_ Pages

Report Nbr: 34185

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	ВАТСН	23.2
W05068	W07-011	B1L6W0	J6K180149-1	JJ2NX1AA	9JJ2NX10	6331331	
		B1L6W0	J6K180149-1	JJ2NX1AC	9JJ2NX10	6331348	
		B1L6W0	J6K180149-1	JJ2NX1AD	9JJ2NX10	6331340	
		B1L6W0	J6K180149-1	JJ2NX1AE	9JJ2NX10	6331335	
		B1L760	J6K180149-2	JJ2N21AA	9JJ2N210	6331331	
		B1L760	J6K180149-2	JJ2N21AC	9JJ2N210	6331348	4
		B1L760	J6K180149-2	JJ2N21AD	9JJ2N210	6331339	SOF SOF
		B1L760	J6K180149-2	JJ2N21AE	9JJ2N210	6331335	묏
		B1L6Y4	J6K180149-3	JJ2N91AA	9JJ2N910	6331331	3
		B1L6Y4	J6K180149-3	JJ2N91AC	9JJ2N910	6331348	Ō.
		B1L6Y4	J6K180149-3	JJ2N91AD	9JJ2N910	6331351	
		B1L6Y4	J6K180149-3	JJ2N91AE	9JJ2N910	6331339	- KI
		B1L6Y4	J6K180149-3	JJ2N91AF	9JJ2N910	6331335	inginality for the state of the
		B1L6X0	J6K180149-4	JJ2PK1AA	9JJ2PK10	6331331	
		B1L6X0	J6K180149-4	JJ2PK1AC	9JJ2PK10	6331340	77.147.284.284

Comments:

Report Nbr: 34185

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	ВАТСН
W05068	W07-011	B1L6X0	J6K180149-4	JJ2PK1AD	9JJ2PK10	6331335
		B1L6V5	J6K180149-5	JJ2TP1AA	9JJ2TP10	6331331
		B1L6V5	J6K180149-5	JJ2TP1AC	9JJ2TP10	6331348
		B1L6V5	J6K180149-5	JJ2TP1AD	9JJ2TP10	6331339
		B1L6V5	J6K180149-5	JJ2TP1AE	9JJ2TP10	6331335
		B1L715	J6K180149-6	JJ2TT1AA	<b>9JJ2TT10</b>	6331331
		B1L715	J6K180149-6	JJ2TT1AC	9JJ2TT10	6331340
		B1L715	J6K180149-6	JJ2TT1AD	9JJ2TT10	6331335
		B1L799	J6K180164-1	JJ2VD1AA	9JJ2VD10	6331331
		B1L799	J6K180164-1	JJ2VD1AC	9JJ2VD10	6331345
		B1L799	J6K180164-1	JJ2VD1AD	9JJ2VD10	6331346
		B1L799	J6K180164-1	JJ2VD1AE	9JJ2VD10	6331339
		B1L623	J6K180164-2	JJ2VN1AA	9JJ2VN10	6331331
		B1L623	J6K180164-2	JJ2VN1AC	9JJ2VN10	6331345
		B1L623	J6K180164-2	JJ2VN1AD	9JJ2VN10	6331346
		B1L623	J6K180164-2	JJ2VN1AE	9JJ2VN10	6331348
		B1L623	J6K180164-2	JJ2VN1AF	9JJ2VN10	6331339
		B1L619	J6K180164-3	JJ2V11AA	9JJ2V110	6331331
		B1L619	J6K180164-3	JJ2V11AC	9JJ2V110	6331345
		B1L619	J6K180164-3	JJ2V11AD	9JJ2V110	6331346
		B1L619	J6K180164-3	JJ2V11AE	9JJ2V110	6331348
		B1L619	J6K180164-3	JJ2V11AG	9JJ2V110	6331338
		B1L619	J6K180164-3	JJ2V11AH	9JJ2V110	6331351
		B1L619	J6K180164-3	JJ2V11AJ	9JJ2V110	6331339
		B1L619	J6K180164-3	JJ2V11AM	9JJ2V110	6360197
		B1L634	J6K180164-4	JJ2WH1AA	9JJ2WH10	6331331

Comments:

Report Nbr: 34185

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	ВАТСН
W05068	W07-011	B1L634	J6K180164-4	JJ2WH1AC	9JJ2WH10	6331352
		B1L634	J6K180164-4	JJ2WH1AD	9JJ2WH10	6331339
		B1L627	J6K180164-5	JJ2WR1AA	9JJ2WR10	6331331
		B1L627	J6K180164-5	JJ2WR1AC	9JJ2WR10	6331345
		B1L627	J6K180164-5	JJ2WR1AE	9JJ2WR10	6331348
		B1L627	J6K180164-5	JJ2WR1AF	9JJ2WR10	6331352
		B1L627	J6K180164-5	JJ2WR1AG	9JJ2WR10	6331339
		B1L627	J6K180164-5	JJ2WR3AD	9JJ2WR30	7003498
		B1L626	J6K180164-6	JJ2W41AA	9JJ2W410	6331331
		B1L626	J6K180164-6	JJ2W41AC	9JJ2W410	6331345
		B1L626	J6K180164-6	JJ2W41AD	9JJ2W410	6331346
		B1L626	J6K180164-6	JJ2W41AE	9JJ2W410	6331348
		B1L626	J6K180164-6	JJ2W41AF	9JJ2W410	6331352
		B1L626	J6K180164-6	JJ2W41AG	9JJ2W410	6331339
		B1L615	J6K180164-7	JJ2XD1AA	9JJ2XD10	6331331
		B1L615	J6K180164-7	JJ2XD1AC	9JJ2XD10	6331345
		B1L615	J6K180164-7	JJ2XD1AD	9JJ2XD10	6331346
		B1L615	J6K180164-7	JJ2XD1AE	9JJ2XD10	6331348
		B1L615	J6K180164-7	JJ2XD1AG	9JJ2XD10	6331338
		B1L615	J6K180164-7	JJ2XD1AH	9JJ2XD10	6331351
		B1L615	J6K180164-7	JJ2XD1AJ	9JJ2XD10	6331339
		B1L615	J6K180164-7	JJ2XD1AK	9JJ2XD10	6360197
	107-011	B1L2W4	J6K210219-2	JJ6KT1AA	9JJ6KT10	6331335
		B1L2R8	J6K210219-3	JJ6K21AA	9JJ6K210	6331335
		B1L2T4	J6K210219-4	JJ6K81AA	9JJ6K810	6331335
	S07-011	B1L3X4	J6K210263-1	JJ6201AA	9JJ62010	6331331

Comments:

Report Nbr: 34185

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH	
W05068	S07-011	B1L3X7	J6K210263-2	JJ6231AA	9JJ62310	6331331	
		B1L3X1	J6K210263-3	JJ6261AA	9ЈЈ62610	6331331	



STL Richland 2800 George Washington Way Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590

www.stl-inc.com

# Certificate of Analysis

Pacific Northwest National Laboratories Sigma V Building Richland, WA 99352

January 12, 2007

Attention: Dot Stewart

SAF Number

W07-011, I07-011, S07-011

Date SDG Closed

November 20, 2006

Number of Samples

Nineteen (19)

Sample Type

Water

SDG Number

W05068

Data Deliverable

45-Day / Summary

## CASE NARRATIVE

#### I. Introduction

Between November 17, 2006 and November 20, 2006, nineteen water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

PGW ID#	STLR ID#	<b>MATRIX</b>	DATE OF RECEIPT
B1L6W0	JJ2NX	WATER	11/17/06
B1L760	JJ2N2	WATER	11/17/06
B1L6Y4	JJ2N9	WATER	11/17/06
B1L6X0	JJ2PK	WATER	11/17/06
B1L6V5	JJ2TP	WATER	11/17/06
B1L715	JJ2TT	WATER	11/17/06
B1L799	JJ2VD	WATER	11/17/06
B1L623	JJ2VN	WATER	11/17/06
B1L619	JJ2V1	WATER	11/17/06
B1L634	IJ2WH	WATER	11/17/06
B1L627	H2WR	WATER	11/17/06
B1L626	JJ2W4	WATER	11/17/06
B1L615	JJ2XD	WATER	11/17/06
DILUID	JJZAD	11 1 1 1 1 1 1 1	

# Pacific Northwest National Laboratories January 12, 2007

R	1L2W4	JJ6KT	WATER	11/17/06
	31L2R8	JJ6K2	WATER	11/20/06
	31L2T4	JJ6K8	WATER	11/20/06
– E	31L3X4	JJ620	WATER	11/20/06
E	31L3X7	JJ623	WATER	11/20/06
E	BIL3XI	JJ626	WATER	11/20/06

#### II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

## III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

## **Gas Proportional Counting**

Gross Alpha by method RICH-RC-5014 Gross Beta by method RICH-RC-5014 Strontium-90 by method RICH-RC-5006

## Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017 Iodine-129 (LL) by method RICH-RC-5025

### **Liquid Scintillation Counting**

Technetium-99 by TEVA method RICH-RC-5065 Technetium-99 by method RICH-RC-5078 Tritium by method RICH-RC-5007

6

Nickel 63 by method RICH-RC-5069

# **Laser Induced Phosphorimetry**

Total Uranium by method RICH-RC-5058

# IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

#### V. Comments

#### **Gas Proportional Counting**

Gross Alpha by method RICH-RC-5014:

Reduced volumes were analyzed based on elevated screen results for samples B1L619, B1L623, B1L626, B1L615and B1L619 DUP. Due to a slightly higher count rate in the background of the alpha detector the MDA was not quite met on the duplicate, but it was on the sample itself. The MDA achieved was 3.27 pCi/l. The sample result was greater than the MDA. Except as note, the LCS, batch blank, samples and sample duplicate (B1L619) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The duplicates were out on this batch and a recount did not help. The sample and duplicate were reanalyzed with good results. Except as noted, the LCS, batch blank, samples and sample duplicate (B1L627) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1L6Y4) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017:

The LCS, batch blank, samples and sample duplicate (B1L626) results are within contractual requirements.

# Iodine-129 (LL) by method RICH-RC-5025:

BATCH 6331352

The LCS, batch blank, samples and sample duplicate (B1L627) results are within contractual requirements.

BATCH 6334470

On December 21, 2006 STL Richland proposed to analyze samples B1L619 and B1L615 by method I129LL\_SEP\_LEPS\_GS\_LL rather than by method I129LL\_ETVDSK\_SEP\_GS as was requested on the chain of custody. Proposal was accepted on 12/21/06 by email and IRF (PNNL Tracking Number: 07-1).

The LCS, batch blank, samples and sample duplicate (B1L619) results are within contractual requirements.

**Liquid Scintillation Counting** 

Technetium-99 by TEVA method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1L799), and sample matrix spike (B1L623) results are within contractual requirements.

Technetium-99 by method RICH-RC-5078:

The LCS, batch blank, samples, sample duplicate (B1L715), and sample matrix spike (B1L6X0) results are within contractual requirements.

# Pacific Northwest National Laboratories January 12, 2007

### Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1L3X4) results are within contractual requirements.

#### Nickel 63 by method RICH-RC-5069

The LCS, batch blank, samples and sample duplicate (B1L619) results are within contractual requirements.

#### **Total Uranium**

#### Total Uranium by method RICH-RC-5058:

The blanks recoveries were very low. The blanks were recounted and a matrix spike was added to the sample on the second count to meet the parameters. Samples B1L6Y4 and B1L6V5 had results greater than the calibration limit. They were recounted at a smaller aliquot with good results. Data is accepted. Except as noted, the LCS, batch blank, samples, sample duplicate (B1L6W0), and sample matrix spike (B1L760) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Sherryl A. Adam Project Manager **Drinking Water Method Cross References** 

	DRINKING WATER ASTM METHOD CROSS REFERENCES							
Referenced Method	Isotope(s)	STL Richland's SOP number						
EPA 901.1	Cs-134, I-131	RICH-RC-5017						
EPA 900.0	Alpha & Beta	RICH-RC-5014						
EPA 903.1	Ra-226	RICH-RC-5005						
EPA 904.0	Ra-228	RICH-RC-5005						
EPA 905.0	Sr89/90	RICH-RC-5006						
ASTM D2460	Total Radium	RICH-RC-5027						
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058						
EPA 906.0	Tritium	RICH-RC-5007						
NOTE:								
The Gross Alpha LCS is prepared with Am-2	41 (unless otherwi	se specified in the case narrative)						
The Gross Beta LCS is prepared with Sr/Y-9	0 (unless otherwis	e specified in the case narrative)						

#### **Uncertainty Estimation**

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants \* f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties  $(u_i)$  are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty  $(u_c)$  multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report	Definitions

	Report Definitions
Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s)  u <sub>c</sub> _Combined  Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, $u_c$ the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
Factor CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFet/(Eff * Yld * Abn * Vol) * IngrFet). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D)/[sqrt(TPUs^2 + TPUd^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
- Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.
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FormNbr	: H	FormatType: FI	EAD <b>Versio</b>		, ipe in	or: 34185			'	edd\FeadIV\Rad\W0506			The second of the second of	
Lab Sample Id:	Client Id:	Test User	Contract Nbr MW6-SBB-A1	SAF Nbr	Sdg Nbr: W05068	QC Type:	_	oisture/ olids%*:	Distilled Volume	Sample On Date:		D	ection ate: 006 08:58	
JJ2N210	B1L760	CAS#	Result				Qual	MDA 1	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Α
Batch	Analyte H-3	10028-17-8	4.14E+03		2.4E+02			3.06E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/2006 19:5	
331331 331348	BE-7	13966-02-4	7.04E+00	•	2.7E+01		U	5.07E+01		GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	CO-60	10198-40-0	2.60E+01	•	9.1E+00			4.66E+00	)	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	CS-134	13967-70-9	-1.43E+00	•	2.9E+00		U	5.02E+00	)	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	CS-134	10045-97-3	-3.79E+00	•	2.5E+00		U ·	3.57E+00	)	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	31
331348	EU-152	14683-23-9	-1.63E+00	pCi/L	5.4E+00		U	9.34E+00	)	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	EU-154	15585-10-1	-2.45E+00	pCi/L	7.3E+00	7.3E+00	U	1.30E+01	1	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	EU-155	14391-16-3	3.00E+00	pCi/L	3.8E+00	3.8E+00	U	7.23E+00	)	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	K-40	13966-00-2	4.34E+00	pCi/L	4.9E+01	4.9E+01	U	1.08E+02	2 .	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	RU-106	13967-48-1	1.45E+01	pCi/L	2.2E+01	2.2E+01	U	4.25E+01	1	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331348	SB-125	14234-35-6	-2.49E+00	pCi/L	6.1E+00	6.1E+00	U	1.05E+0	1	GAMMALL_GS	2.0003E+00	L	12/27/2006 05:3	
331339	TC-99	14133-76-7	1.20E+04	pCi/L	5.9E+01	8.2E+02		9.78E+00	0 100.0	TC99_ETVDSK_LS	1.255E-01	Ł	12/21/2006 21:0	
331335	Uranium	7440-61-1	2.14E+01	ug/L	2.5E+00	2.5E+00		8.19E-02	2	UTOT_KPA	2.56E-02	ML	01/03/2007 10:4	42
Lab Sample Id	Client	Test User	Contract Nbr	SAF N	or Sdg Nbr			Moisture/ Solids%*:	Distilled Volume			ı	lection Date:	
JJ2N910	B1L6Y4		MW6-SBB-A1	W07-01	1 W0506	8							2006 09:46	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size 5.00E-03	Unit L	Analy Date/Time 12/16/2006 21:	
331331	H-3	10028-17-8	4.69E+03	pCi/L	2.5E+02			3.06E+0		906.0_H3_LSC	1.9998E+00		12/27/2006 05:	
5331348	BE-7	13966-02-4	1.25E+01	pCi/L	2.8E+01		U	5.39E+0		GAMMALL_GS	1.9998E+00		12/27/2006 05:	
6331348	CO-60	10198-40-0	3.49E-01	pCi/L		2.0E+00	U	4.24E+0		GAMMALL_GS	1.9998E+00		12/27/2006 05:	
6331348	CS-134	13967-70-9	-3.65E-01	pCi/L		2.4E+00	U	4.46E+0		GAMMALL_GS	1.9998E+00		12/27/2006 .05:	
6331348	CS-137	10045-97-3	-1.31E+00			2.3E+00	U	3.87E+0		GAMMALL_GS GAMMALL_GS	1.9998E+00		12/27/2006 05	
6331348	EU-152	14683-23-9	-1.08E+00	pCi/L		5.8E+00	U	1.03E+0		<del>-</del>	1.9998E+00		12/27/2006 05	
6331348	EU-154	15585-10-1	2.33E+00	pCi/L		4.9E+00		1.14E+0		GAMMALL_GS	1.9998E+0	_	12/27/2006 05	
6331348	EU-155	14391-16-3	4.87E+00	pCi/L	5.0E+00			9.58E+(		GAMMALL_GS	1.9998E+0		12/27/2006 05	
6331348	K-40	13966-00-2	-3.40E+0	1 pCi/L	4.4E+01			9.45E+0		GAMMALL_GS	1.9998E+0		12/27/2006 05	
6331348	RU-106	13967-48-1	-2.26E+0	) pCi/L				3.73E+(		GAMMALL GS	1.9998E+0	_	12/27/2006 05	
6331348	SB-125	14234-35-6	5 2.52E+00	pCi/L				1.09E+0		GAMMALL_GS SRISO_SEP_PRE		_	12/31/2006 08	
000.0				0:4	1.6E-01	1.7E-01	U	3.62E-0	п /5.3	SKISU_SEF_FRE	. 1.0043LTV			
6331351	SR-90	10098-97-2	2 1.15E-01	pCi/L	3.0E+0				00 100.0	TC99_ETVDSK_L		L	12/21/2006 21	1:05

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

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ì	1/12/2007	2:40:03	PM

# STL Richland Report

Lab Code: STLRL

FormNbr	r: R	FormatType: Ff	EAD <b>Versi</b> o	on: 05	Rpt Nb	or: 34185		File Name: h:	\Heportdb\e	edd\FeadIV\Rad\W050	ьв.шаа, п:хнерс	л сорлеаа	nreaury (nauto		
1 6331335	Uranium	7440-61-1	2.19E+02	ug/L	2.6E+01	2.6E+01		8.22E-02		UTOT_KPA	2.55E-02		01/05/2007	14:18	- -
Lab Sample Id: 9JJ2NX10	Client Id: B1L6W0	Test User	Contract Nbr VW6-SBB-A1	<b>SAF Nb</b> W07-011	r Sdg Nbr: W05068	QC Type	_	Moisture/ Solids%*:	Distilled Volume	Sample On Date:		D	ection rate: 006 08:19		
	Analyte	CAS#	Result		CntU 2S	TotU 2S	Qual	MDA T	rcYield	Method	Alq Size	Unit	Analy Date/T	ïme	Act
Batch 6331331	H-3	10028-17-8	7.43E+03			4.4E+02		3.05€+02	100.0	906.0_H3_LSC	5.00E-03	L	12/16/2006	18:33	j
6331348	BE-7	13966-02-4	1.67E+01	pCi/L	2.9E+01	2.9E+01	U	5.53E+01		GAMMALL_GS	1.9996E+00	L	12/27/2006		
6331348	CO-60	10198-40-0	7.01E+01	pCi/L	1.3E+01	1.3E+01		4.49E+00		GAMMALL_GS	1.9996E+00	L	12/27/2006		1
6331348	CS-134	13967-70-9	1.78E+00	pCi/L	3.3E+00	3.3E+00	U	6.37E+00		GAMMALL_GS	1.9996E+00	L	12/27/2006		I
6331348	CS-137	10045-97-3	-7.91E-01	pCi/L	2.5E+00	2.5E+00	U	4.52E+00		GAMMALL_GS	1.9996E+00	L	12/27/2006		
6331348	EÜ-152	14683-23-9	2.84E-01	pCi/L	6.1E+00	6.1E+00	U	1.12E+01		GAMMALL_GS	1.9996E+00	L	12/27/2006	05:31	l
6331348	EU-154	15585-10-1	1.22E+00	pCi/L	7.7E+00	7.7E+00	U	1.51E+01		GAMMALL_GS	1.9996E+00	L	12/27/2006		
6331348	EU-155	14391-16-3	6.14E-01	pCi/L	5.0E+00	5.0E+00	U	8.80E+00	1	GAMMALL_GS	1.9996E+00	L	12/27/2006		
6331348	K-40	13966-00-2	-3.57E+01	pCi/L	4.4E+01	4.4E+01	U	9.90E+01		GAMMALL_GS	1.9996E+00	L	12/27/2006		
6331348	RU-106	13967-48-1	-1.59E+01	pCi/L	2.2E+01	2.2E+01	U	3.74E+01		GAMMALL_GS	1.9996E+00	L	12/27/2006		
6331348	SB-125	14234-35-6	3.51E+00	pCi/L	6.0E+00	6.0E+00	U	1.16E+01		GAMMALL_GS	1.9996E+00	L	12/27/2006	05:31	١
6331340	TC-99	14133-76-7	2.08E+04	pCi/L	7.8E+01	1.2E+03		9.84E+00	100.0	TC99_SEP_LSC	1.253E-01	L	12/23/2006	06:30	)
6331335	Uranium	7440-61-1	5.05E+00	ug/L	5.3E-01	5.3E-01		8.28E-02		UTOT_KPA	2.53E-02	ML	01/03/2007	10:37	' l
Lab Sample Id		Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b> I W07-01	Nbr:			Moisture/ Solids%*:	Distilled Volume			ı	llection Date: 2006 11:02		
9JJ2PK10		C * C #	Result	Unit	CntU 2S	TotU 2S	Qua	MDA	TrcYield	Method	Alq Size	Unit	Analy Date	Time	Ac
Batch 6331331	Analyte H-3	CAS# 10028-17-8	1.36E+04	pCi/L		6.7E+02		3.05E+02	2 100.0	906.0_H3_LSC	5.00E-03	L	12/16/2006	22:39	9 1
6331340	TC-99	14133-76-7	1.32E+02			1.3E+01		9.84E+00	0 100.0	TC99_SEP_LSC	1.254E-01	L	12/23/2006	06:30	) [
6331335	Uranium	7440-61-1	1.51E+02			1.6E+01		2.10E+0	0	UTOT_KPA	0.00E+00	ML	. 01/03/2007	10:48	8 I
Lab Sample lo	Client d: ld:	Test User	Contract Nbr	SAF N	Nbr	: Typ		Moisture/ Solids%*:	Distille Volum				Date: /2006 11:48		
9JJ2TP10	B1L6V5		MW6-SBB-A	1 W07-01		•			w	Method	Alq Size	Unit	Analy Date	/Time	A
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	⊪ <b>MDA</b> 3.06E+0	TrcYield	906.0_H3_LSC	5.00E-03	L	12/17/200		
6331331	H-3	10028-17-8		·		3.5E+02	U	4.31E+0		GAMMALL_GS	2.003E+00	L	12/27/200	6 05:3	2
6331348		13966-02-4						8.07E+0		GAMMALL_GS	2.003E+00	L	12/27/200		
6331348		10198-40-0				3.4E+00 2.3E+00	_	4.23E+0		GAMMALL_GS	2.003E+00	L	12/27/200	6 05:3	2
6331348	CS-134	13967-70-9	9 -2.56E-01	1 pCi/L	2.3E+00	, ∠.3E+UU	Ü	7.201.70							
												1 . 1			

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/12/2007 2:40:03 PM	STL Richland Report	Lab Code: STLRL

FormNbr	r: R	FormatType: FE	AD <b>Version</b>	n: 05	Rpt Nt	or: 34185		File Name: h	:\Reportdb\e	edd\FeadIV\Rad\W0506	8.Edd, h:\Repo	rtdb\edc	I\FeadIV\Rad\3418	5.Edd
6331348	CS-137	10045-97-3	7.51E-01	pCi/L	2.1E+00	2.1E+00	U	4.13E+00		GAMMALL_GS	2.003E+00	L	12/27/2006 05	32
6331348	EU-152	14683-23-9	1.76E+00	pCi/L	4.7E+00	4.7E+00	U	8.95E+00		GAMMALL_GS	2.003E+00	L	12/27/2006 05	32
6331348	EU-154	15585-10-1	2.96E+00	pCi/L	3.0E+00	3.0E+00	U	8.87E+00		GAMMALL_GS	2.003E+00	L	12/27/2006 05	:32
6331348	EU-155	14391-16-3	-1.87E+00	pCi/L	4.0E+00	4.0E+00	U	6.69E+00		GAMMALL_GS	2.003E+00	L	12/27/2006 05	:32
6331348	K-40	13966-00-2	-5.95E+00	pCi/L	3.0E+01	3.0E+01	U	6.32E+01		GAMMALL_GS	2.003E+00	L	12/27/2006 05	:32
6331348	RU-106	13967-48-1	-1.10E+01	pCi/L	1.8E+01	1.8E+01	U	2.98E+01		GAMMALL_GS	2.003E+00	L	12/27/2006 05	:32
6331348	SB-125	14234-35-6	-2.05E+00	pCi/L	4.6E+00	4.6E+00	U	7.85E+00		GAMMALL_GS	2.003E+00	L	12/27/2006 05	:32
6331339	TC-99	14133-76-7	3.41E+03	pCi/L	3.2E+01	2.4E+02		9.77E+00	100.0	TC99_ETVDSK_LS	1.261E-01	L	12/21/2006 21	:05
6331335	Uranium	7440-61-1	2.19E+02	ug/L	2.6E+01	2.6E+01		8.15E-02		UTOT_KPA	2.57E-02	ML	01/05/2007 14	:25
Lab Sample Id:		Test User	Contract Nbr	SAF NE	Nbr:	QC Type		oisture/ olids%*:	Distilled Volume	Sample On Date:		D	ection rate: 006 13:00	
9JJ2TT10	B1L715			N07-011 Unit		TotU 2S	Qual	MDA -	FrcYield	Method	Alq Size	Unit	Analy Date/Time	e Act
Batch 6331331	Analyte H-3	<b>CAS#</b> 10028-17-8	Result 1.30E+03	pCi/L	1.7E+02		Guai	3.05E+02		906.0_H3_LSC	5.00E-03	L	12/17/2006 01	
6331340	TC-99	14133-76-7	1.23E+01	pCi/L	4.5E+00			9.85E+00		TC99_SEP_LSC	1.252E-01	L	12/23/2006 06	
6331335	Uranium	7440-61-1	3.26E+00	ug/L	3.4E-01	3.4E-01		8.19E-02		UTOT_KPA	2.56E-02	ML	01/03/2007 10	:59 I
Lab Sample Id:	Client : id:	Test User	Contract Nbr	SAF N	Nbr:	QC Type		loisture/ olids%*:	Distilled Volume	•			ection Pate:	
		User	Nbr	<b>SAF NI</b> W07-01	<b>Nb</b> r: W05068	Тур	e: S	olids%*:	Volume	On Date:		11/17/2	Pate: 006 11:05	
Sample Id: 9JJ2V110 Batch	B1L619 Analyte	User       CAS#	Nbr MW6-SBB-A1 N Result	W07-01	Nbr: W05068 CntU 2S	Type TotU 2S		olids%*:  MDA	Volume TrcYield	On Date:	Alq Size	11/17/2 Unit	Pate: 006 11:05 Analy Date/Tim	
Sample Id: 9JJ2V110  Batch 6331331	: id: B1L619 Analyte H-3	User CAS# 10028-17-8	Nbr MW6-SBB-A1 N Result 1.76E+06	W07-01 Unit pCi/L	Nbr: W05068 CntU 2S 4.2E+03	Type 3 TotU 2S 6.5E+04	e: Se Qual	olids%*: MDA 3.06E+02	Volume TrcYield : 100.0	On Date:  Method  906.0_H3_LSC	5.00E-03	11/17/2 Unit L	Date: 006 11:05 Analy Date/Tim 12/17/2006 09	:33
Sample Id: 9JJ2V110 Batch 6331331 6331345	id: B1L619 Analyte H-3 ALPHA	User CAS# 10028-17-8 12587-46-1	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00	W07-01 Unit pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00	Type TotU 2S 6.5E+04 1.6E+00	e: S	olids%*: MDA 3.06E+02 2.91E+00	Volume TrcYield 100.0	On Date:  Method  906.0_H3_LSC  9310_ALPHABETA	5.00E-03 7.51E-02	11/17/2 Unit L L	Date: 006 11:05 Analy Date/Tim 12/17/2006 09 12/29/2006 15	:33   :29
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331346	id: B1L619 Analyte H-3 ALPHA BETA	User CAS# 10028-17-8 12587-46-1 12587-47-2	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03	W07-01 Unit pCi/L pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02	e: So Qual U	MDA 3.06E+02 2.91E+00 4.75E+00	Volume TrcYield 100.0 100.0	On Date:  Method  906.0_H3_LSC  9310_ALPHABETA  9310_ALPHABETA	5.00E-03 7.51E-02 7.73E-02	11/17/2 Unit L L L	Date: 006 11:05 Analy Date/Tim 12/17/2006 09 12/29/2006 15 12/29/2006 16	:33   :29   ::26
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331346 6331348	Haller B1L619 Analyte H-3 ALPHA BETA BE-7	User CAS# 10028-17-8 12587-46-1 12587-47-2 13966-02-4	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00	W07-01 Unit pCi/L pCi/L pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01	e: So Qual U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01	Volume TrcYield : 100.0 ) 100.0 ) 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00	11/17/2 Unit L L L L	Date: 006 11:05 Analy Date/Tim 12/17/2006 09 12/29/2006 15 12/29/2006 16 12/27/2006 05	:33   :29   ::26   ::32
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331346 6331348 6331348	H-3 ALPHA BETA BE-7 CO-60	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00	W07-012 Unit pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00	e: So Qual U U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00	11/17/2 Unit L L L L	Date: 006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 16 12/27/2006 09 12/27/2006 09	:33   I ::29   I ::26   I ::32   I
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331346 6331348 6331348	H-3 ALPHA BETA BE-7 CO-60 CS-134	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01	W07-01 Unit pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00	Qual U U U U U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.06E+00	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00	11/17/2 Unit L L L L L	Date: 006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 19 12/27/2006 09 12/27/2006 09 12/27/2006 09	:33   I :29   I :26   I :32   I :32   I
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331348 6331348 6331348 6331348	E id: B1L619 Analyte H-3 ALPHA BETA BE-7 CO-60 CS-134 CS-137	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9  10045-97-3	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01 -1.11E-01	W07-01: Unit pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00 1.7E+00	Qual U U U U U U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.06E+00	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00 1.9995E+00	L 11/17/2 Unit L L L L L	Date: 006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 16 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09	:33   I :29   I :26   I :32   I :32   I :32   I
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331346 6331348 6331348 6331348 6331348	E id: B1L619 Analyte H-3 ALPHA BETA BE-7 CO-60 CS-134 CS-137 EU-152	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9  10045-97-3  14683-23-9	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01 -1.11E-01 -7.37E-01	wor-on- unit pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00 4.0E+00	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00 4.0E+00	Qual U U U U U U U U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.04E+00 6.86E+00	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00	11/17/2 Unit L L L L L	Date: 006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 19 12/27/2006 09 12/27/2006 09 12/27/2006 09	:33   1 :29   1 :26   1 :32   1 :32   1 :32   1 :32   1 :32   1
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331346 6331348 6331348 6331348 6331348 6331348	E id: B1L619 Analyte H-3 ALPHA BETA BE-7 CO-60 CS-134 CS-137 EU-152 EU-154	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9  10045-97-3  14683-23-9  15585-10-1	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01 -1.11E-01 -7.37E-01 6.60E-01	W07-01:  unit  pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00	e: Se Qual  U  U  U  U  U  U  U  U  U  U  U  U  U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.06E+00 3.04E+00 6.86E+00	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00	L 11/17/2 Unit L L L L L	Date: 006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 16 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09	:33   1   1:29   1   1:26   1   1:32   1   1
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331348 6331348 6331348 6331348 6331348 6331348 6331348	E id: B1L619 Analyte H-3 ALPHA BETA BE-7 CO-60 CS-134 CS-137 EU-152 EU-154 EU-155	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9  10045-97-3  14683-23-9  15585-10-1  14391-16-3	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01 -1.11E-01 -7.37E-01 6.60E-01 1.33E+00	W07-01:  Unit  pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00 3.0E+00	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00 3.0E+00	e: Se Qual  U  U  U  U  U  U  U  U  U  U  U  U  U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.04E+00 6.86E+00 9.40E+00 5.72E+00	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00	L 11/17/2 Unit L L L L L L	Date: 006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 19 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09	:33   1   1   1   1   1   1   1   1   1
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331348 6331348 6331348 6331348 6331348 6331348 6331348	E id: B1L619  Analyte H-3  ALPHA BETA BE-7  CO-60  CS-134  CS-137  EU-152  EU-154  EU-155  K-40	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9  10045-97-3  14683-23-9  15585-10-1  14391-16-3  13966-00-2	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01 -1.11E-01 -7.37E-01 6.60E-01 1.33E+00 -9.23E+00	W07-011  unit pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00 3.0E+00 3.5E+01	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00 3.0E+00 3.5E+01	e: Se Qual  U  U  U  U  U  U  U  U  U  U  U  U  U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.06E+00 3.04E+00 6.86E+00	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00	L 11/17/2 Unit L L L L L L	Date:  006 11:05  Analy Date/Tim 12/17/2006 05 12/29/2006 16 12/27/2006 05 12/27/2006 05 12/27/2006 05 12/27/2006 05 12/27/2006 05 12/27/2006 05 12/27/2006 05 12/27/2006 05 12/27/2006 05	:33   1   1   1   1   1   1   1   1   1
Sample Id: 9JJ2V110 Batch 6331331 6331345 6331348 6331348 6331348 6331348 6331348 6331348 6331348	E id: B1L619 Analyte H-3 ALPHA BETA BE-7 CO-60 CS-134 CS-137 EU-152 EU-154 EU-155	User  CAS#  10028-17-8  12587-46-1  12587-47-2  13966-02-4  10198-40-0  13967-70-9  10045-97-3  14683-23-9  15585-10-1  14391-16-3	Nbr MW6-SBB-A1 N Result 1.76E+06 1.35E+00 1.58E+03 -8.43E+00 2.21E+00 -6.66E-01 -1.11E-01 -7.37E-01 6.60E-01 1.33E+00	W07-01:  Unit  pCi/L	Nbr: W05068 CntU 2S 4.2E+03 1.6E+00 2.1E+01 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00 3.5E+01 1.3E+01	Type 3 TotU 2S 6.5E+04 1.6E+00 3.3E+02 1.8E+01 3.2E+00 1.7E+00 4.0E+00 4.8E+00 3.0E+00	e: Se Qual  U  U  U  U  U  U  U  U  U  U  U  U  U	MDA 3.06E+02 2.91E+00 4.75E+00 3.11E+01 3.62E+00 3.04E+00 6.86E+00 9.40E+00 7.35E+0	Volume TrcYield 100.0 100.0 100.0	Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS GAMMALL_GS	5.00E-03 7.51E-02 7.73E-02 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00 1.9995E+00	L 11/17/2 Unit L L L L L L	Date:  006 11:05  Analy Date/Tim 12/17/2006 09 12/29/2006 16 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09 12/27/2006 09	:33   1 :29   1 :26   1 :32   1 :32   1 :32   1 :32   1 :32   1 :32   1 :332   1 :332   1 :332   1

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/12/2007 2:40:03	PΛ
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# STL Richland Report

Lab Code: STLRL

FormNbr	; R	FormatType: FE	AD <b>Versio</b>	n: 05	Rpt Ni	or: 34185		File Name: h	:\Reportdb\e	dd\FeadIV\Rad\W050	68.Edd, h:\Rep	ortdb\ed	d\FeadIV\Rad\34185.E	Edd
6360197	I-129L	15046-84-1	3.95E+01	pCi/L	4.2E+00	4.2E+00		4.92E-01	86.5	I129LL_SEP_LEPS	3.9223E+00	L	01/03/2007 19:06	, 1
331338	NI-63	13981-37-8	8.36E+02	pCi/L	7.9E+00	5.7E+01		3.21E+00	103.4	NI63_LSC	4.015E-01	L	12/23/2006 00:17	
	SR-90	10098-97-2	-4.27E-02	pCi/L	2.1E-01	2.1E-01	U	4.98E-01	60.3	SRISO_SEP_PRE	1.0064E+00	L	12/31/2006 08:18	
331339	TC-99	14133-76-7	7.56E+03	pCi/L	4.7E+01	5.2E+02		9.80E+00	100.0	TC99_ETVDSK_LS	1.26E-01	L	12/21/2006 21:05	j   
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nb	Nbr:	QC Type	<b>)</b> :	Moisture/ Solids%*:	Distilled Volume	Sample On Date:		ı	lection Date:	
JJ2VD10	B1L799	V	MW6-SBB-A1	W07-011	W05068								2006 13:02	
Batch	Analyte	CAS#	Result			TotU 2S	Qua		TrcYield	Method	Alq Size	Unit	Analy Date/Time 12/17/2006 02:44	<b>Act</b> 4 I
331331	H-3	10028-17 <b>-</b> 8	1.37E+03		1.7E+02			3.05E+02		906.0_H3_LSC	5.00E-03	L		
331345	ALPHA	12587-46-1	1.02E+00		1.1E+00		U	1.66E+00		9310_ALPHABETA		L	12/29/2006 18:51	
331346	BETA	12587-47-2	1.75E+01	•	2.4E+00	3.3E+00		3.05E+00		9310_ALPHABETA		L	12/29/2006 15:35	
331339	TC-99	14133-76-7	6.72E+01	pCi/L	6.0E+00	1.0E+01		9.77E+00	100.0	TC99_ETVDSK_LS	1.257E-01	L	12/21/2006 21:05	) I
Lab Sample Id:		Test User	Contract Nbr	SAF Nb	Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume				llection Date: 2006 12:00	
JJ2VN10	B1L623		MW6-SBB-A1				0	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Ac
Batch	Analyte	<b>CAS#</b> 10028-17-8	Result 5.07E+03	<b>Unit</b> pCi/L	CntU 2S 2.6E+02	7 5E±02	Qua	3.06E+02		906.0_H3_LSC	5.00E-03	L	12/17/2006 04:0	
5331331	H-3 ALPHA	12587-46-1	1.15E+00	pCi/L		1.2E+00	U	2.06E+00		9310_ALPHABETA		L	12/29/2006 18:5	1 1
6331345 6331346	BETA	12587-47-2	2.73E+01	pCi/L			Ŭ	2.71E+00		9310_ALPHABETA		L	12/29/2006 15:3	5 1
6331348	BE-7	13966-02-4	1.58E+01	pCi/L	2.1E+01		U	4.18E+01		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	2
6331348	CO-60	10198-40-0	1.62E+00	pCi/L	2.0E+00	2.0E+00	U	4.29E+00		GAMMALL GS	2.00E+00	L	12/27/2006 05:3:	2 1
6331348	CS-134	13967-70-9	9.76E-01	pCi/L	1.5E+00		U	3.13E+00		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	2 1
	CS-134	10045-97-3	-2.95E-01	pCi/L	1.8E+00	1.8E+00	U	3.19E+00		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	2 1
6331348			1.56E+00	pCi/Ĺ	4.4E+00	4.4E+00	U	8.12E+00		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	2 1
6331348	EU-152	14683-23-9 15585-10-1	1.99E+00	pCi/L	5.1E+00	5.1E+00	U	1.04E+0		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	32 1
6331348	EU-154		-1.98E+00	'	3.7E+00	3.7E+00	U	6.18E+0		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	32
6331348	EU-155	14391-16-3		pCi/L	2.8E+01		U	6,01E+0		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	32 1
6331348	K-40	13966-00-2	1.80E+00	pCi/L		1.5E+01	U	2.84E+0		GAMMALL_GS	2.00E+00	L	12/27/2006 05:3	32
6331348	RU-106	13967-48-1	3.88E+00	pCi/L		4.1E+00				GAMMALL_GS	2.00E+00	<u>L</u>	12/27/2006 05:3	32
6331348 6331339	SB-125 TC-99	14234-35-6 14133-76-7	2.43E+00 9.54E+01	pCi/L		1.2E+01	J	9.80E+0		TC99_ETVDSK_L		L	12/21/2006 21:0	)5
Lab Sample Id	Client	Test User	Contract Nbr MW6-SBB-A1	SAF N	br Sdg Nbr	: Туг		Moisture/ Solids%*:	Distiller Volum		:	-	Dilection Date: /2006 08:31	

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/12/2007 2:40:03 PM

# STL Richland Report

Lab Code: STLRL

FormNbr	r: R	FormatType: FE	AD <b>Versio</b>	n: 05	Rpt N	or: 34185		File Name: h:	\Reportdb\e	dd\FeadIV\Rad\W0506	8.Edd, h:\Repo	rtdb\edc	l\FeadIV\Rad\34185.Edd
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA T	rcYield	Method	Alq Size	Unit	Analy Date/Time A
6331331	H-3	10028-17-8	4.07E+04	pCi/L	6.5E+02	1.7E+03		3.04E+02	100.0	906.0_H3_LSC	5.00E-03	L	12/17/2006 13:39
6331345	ALPHA	12587-46-1	9.62E-01	pCi/L	8.9E-01	9.2E-01	U	1.50E+00	100.0	9310_ALPHABETA	1.465E-01	L	12/29/2006 15:29
6331346	ВЕТА	12587-47-2	1.95E+02	pCi/L	7.4E+00	2.6E+01		3.51E+00	100.0	9310_ALPHABETA	1.597E-01	L	12/29/2006 15:35
6331348	BE-7	13966-02-4	-5.89E+00	pCi/L	2.8E+01	2.8E+01	U	4.97E+01		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	CO-60	10198-40-0	-2.24E-01	pCi/L	2.4E+00	2.4E+00	U	4.64E+00		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	CS-134	13967-70-9	2.24E-01	pCi/L	2.8E+00	2.8E+00	U	5.24E+00		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	CS-137	10045-97-3	7.67E-01	pCi/L	2.3E+00	2.3E+00	U	4.42E+00		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	EU-152	14683-23-9	-2.93E+00	pCi/L	5.7E+00	5.7E+00	U	9.60E+00		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	EU-154	15585-10-1	-2.31E+00	pCi/L	7.2E+00	7.2E+00	U	1.30E+01		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	EU-155	14391-16-3	-3.33E+00	pCi/L	4.8E+00	4.8E+00	U	7.95E+00		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	K-40	13966-00-2	-5.14E+01	pCi/L	5.0E+01	5.0E+01	υ	1.12E+02		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	RU-106	13967-48-1	1.06E+01	pCi/L	2.3E+01	2.3E+01	U	4.44E+01		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331348	SB-125	14234-35-6	4.95E-01	pCi/L	4.9E+00	4.9E+00	U	9.28E+00		GAMMALL_GS	1.9502E+00	L	12/27/2006 07:15
6331352	I-129L	15046-84-1	2.08E+00	pCi/L	4.9E-01	4.9E-01		3.45E-01	92.7	I129LL_SEP_LEPS	3.8976E+00	L	01/03/2007 17:00
6331339	TC-99	14133-76-7	9.07E+02	pCi/L	1.7E+01	6.7E+01		9.82E+00	100.0	TC99_ETVD\$K_L\$	1.255E-01	L	12/21/2006 21:05
Lab Sample Id:	Client : Id:	Test User	Contract Nbr	SAF N	br Sdg Nbr:	QC		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			lection Date:
9JJ2WH10	B1L634	V	MW6-SBB-A1	W07-01	1 W0506	3						11/17/2	2006 09:35
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qua		TrcYield	Method	Alq Size	Unit	Analy Date/Time A
6331331	H-3	10028-17-8	4.94E+03	pCi/L	2.6E+02	3.4E+02		3.06E+02		906.0_H3_LSC	5.00E-03	L	12/17/2006 10:55
6331352	I-129L	15046-84-1	-3.17E-02	pCi/L	1.8E-01	1.8E-01	U	3.12E-01		I129LL_SEP_LEPS			01/03/2007 15:15
6331339	TC-99	14133-76-7	1.63E+02	pCi/L	8.0E+00	1.7E+01		9.75E+00	100.0	TC99_ETVDSK_LS	1.264E-01	L	12/21/2006 21:05
Lab Sample Id		Test User	Contract Nbr MW6-SBB-A1	SAF N	Nbr	: Тур		Moisture/ Solids%*:	Distilled Volume	· · · · · · · · · · · · · · · · · · ·			llection Date: 2006 07:00
		CAS#	Result	Unit	CntU 2S	TotU 2S	Qua	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time
<b>Batch</b> 6331331	Analyte H-3	10028-17-8	9.38E+01	pCi/L	1.3E+02			3.12E+02		906.0_H3_LSC	5.00E-03	L	12/17/2006 12:17
	ALPHA	12587-46-1	1.22E-01	pCi/L	3.6E-01	3.6E-01	Ü	9.07E-01		9310_ALPHABETA	1.995E-01	L	12/29/2006 18:51
	2 35ml 2 17 %	12001 10 1		•	2.8E+01		U	4.92E+01	I	GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32
6331345	RF-7	13966-02-4	1 29E-01	pCi/L	2.0にせい1	2.ULTU 1							
6331348	BE-7	13966-02-4	1,29E-01 9,74F-01	pCi/L pCi/L				5.18E+0(		GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32
	BE-7 CO-60 CS-134	13966-02-4 10198-40-0 13967-70-9	1.29E-01 9.74E-01 -1.69E-01	pCi/L pCi/L pCi/L	2.7E+00	2.7E+00 2.3E+00	U		)	GAMMALL_GS GAMMALL_GS	2.0072E+00		12/27/2006 05:32 12/27/2006 05:32

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/12/200	7 2:40:03 PM	A			ST	L Rich	land	Repor	·t			1.	ah Code: STLRL	
FormNbr	: R	FormatType: FE	AD <b>Versio</b>	n: 05	Rpt Ni	or: 34185		File Name: h	:\Reportdb\	edd\FeadIV\Rad\W0506	68.Edd, h:\Repo	rtdb\ed	d\FeadIV\Rad\34185.E	dd
6331348	EU-152	14683-23-9	-5.92E+00	pCi/L	6.4E+00	6.4E+00	U	1.01E+01			2.0072E+00	L	12/27/2006 05:32	. 1
6331348	EU-154	15585-10-1	-6.77E-01	pCi/L	7.1E+00	7.1E+00	U	1.30E+01		GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32	1
6331348	EU-155	14391-16-3	-5.22E+00	pCi/L	5.8E+00	5.8E+00	U	9.33E+00		GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32	. 1
6331348	K-40	13966-00-2	3.12E+01	pCi/L	6.8E+01	6.8E+01	U	4.12E+01		GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32	.
6331348	RU-106	13967-48-1	-9.52E+00	pCi/L	2.2E+01	2.2E+01	U	3.73E+01		GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32	: 1
6331348	SB-125	14234-35-6	-2.10E-01	pCi/L	5.9E+00	5.9E+00	U	1.04E+01		GAMMALL_GS	2.0072E+00	L	12/27/2006 05:32	: 1
6331352	I-129L	15046-84-1	-1.44E-01	pCi/L	1.4E-01	1.4E-01	U	2.28E-01	92.4	I129LL_SEP_LEPS	3.819E+00	· L	01/03/2007 15:16	<i>i</i> 1
6331339	TC-99	14133-76-7	-3.50E-01	pCi/L	4.0E+00	5.7E+00	U	9.80E+00	100.0	TC99_ETVDSK_LS	1.259E-01	L	12/21/2006 21:05	1
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nb	Nbr:	QC Type		loisture/ olids%*:	Distilled Volume	•		I	lection Date: 2006 07:00	
9JJ2WR30			/IW6-SBB-A1 \				01	1404	Tankinini	الم عداء معا	Alq Size	Unit	Analy Date/Time	Act
Batch 7003498	<b>A</b> nalyte BETA	<b>CAS#</b> 12587-47-2	Result 2.73E-01		1.3E+00	TotU 2S 1.3E+00	Qual U	MDA 2.88E+00	TrcYield 100.0	Method 9310_ALPHABETA	•	L	01/09/2007 12:33	
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nb	Nbr:	QC Typ		loisture/ olids%*:	Distilled Volume			I	ilection Date: 2006 10:14	
9JJ2XD10	B1L615	CAS#	/W6-SBB-A1 ' Result		CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
Batch 6331331	Analyte H-3	10028-17-8	1.61E+05	pCi/L	1.3E+03	6.1E+03	Quai	3.04E+02		906.0_H3_LSC	5.00E-03	L	12/17/2006 15:00	
6331345	ALPHA	12587-46-1	2.65E+00	pCi/L	1.4E+00			1.81E+00	100.0	9310_ALPHABETA	1.257E-01	L	12/29/2006 15:29	<b>3</b>
6331346	BETA	12587-47-2	6.06E+02	pCi/L	1.4E+01	8.0E+01		3.91E+00	100.0	9310_ALPHABETA		L	12/29/2006 15:35	5 l
6331348	BE-7	13966-02-4	8.29E+00	pCi/L	2.6E+01	2.6E+01	U	4.96E+0	1	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5 I
6331348	CO-60	10198-40-0	6.64E-01	pCi/L	2.3E+00	2.3E+00	U	4.87E+00	0	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5 l
6331348	CS-134	13967-70-9	9.38E-01	pCi/L	2.2E+00	2.2E+00	U	4.51E+00	0	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5 l
6331348	CS-137	10045-97-3	1.83E-01	pCi/L	2.1E+00	2.1E+00	U	4.07E+00	0	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5 I
6331348	EU-152	14683-23-9	9.01E-01	pCi/L	5.3E+00	5.3E+00	U	9.68E+00	0	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5
6331348	EU-154	15585-10-1	6.51E-01	pCi/L	5.4E+00	5.4E+00	U	1.12E+0	1	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5 I
6331348	EU-155	14391-16-3	-3.92E+00	pCi/L	3.8E+00	3.8E+00	U	5.83E+0	0	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:15	5 I
6331348	K-40	13966-00-2	-1.52E+01	pCi/L	4.6E+01	4.6E+01	U	1.01E+0	2	GAMMALL_GS	2.0051E+00	L	12/27/2006 07:1	5 I
6331348	RU-106	13967-48-1	-5.94E+00	pCi/L	1.9E+01	1.9E+01	U	3.30E+0	1	GAMMALL_GS	2.0051E+00		12/27/2006 07:1	
6331348	SB-125	14234-35-6	-2.82E+00	pCi/L	4.9E+00	4.9E+00	U	8.34E+0	0	GAMMALL_GS	2.0051E+00		12/27/2006 07:1	
6360197	I-129L	15046-84-1	4.52E+00	pCi/L	7.6E-01	7.6E-01		3.13E-01	1 95.7	1129LL_SEP_LEPS	3.8555E+00	L	01/03/2007 19:0	
6331338	NI-63	13981-37-8	1.63E+02	pCi/L	3.6E+00	1.3E+01		3.16E+0	0 102.2	NI63_LSC	4.006E-01	L	12/23/2006 03:4	
6331351	SR-90	10098-97-2	-8.63E-02	pCi/L	1.3E-01	1.4E-01	U	3.50E-0 <sup>-1</sup>	1 80.6	SRISO_SEP_PRE	1.0056E+00	) L	12/31/2006 08:1	8 1

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

rptFeadRadSummaryEdd v3.48

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

1/12/2003	7 2:40:03 PM	f			ST	L Richl	and	Repo	ort			I,	ab Code: STLRL	
FormNbr	: R	FormatType: F	EAD <b>Versi</b> c	on: 05	Rpt N	or: 34185	!	File Name:	h:\Reportdb\e	edd\FeadIV\Rad\W0506	88.Edd, h:\Re	portdb\edd	d\FeadIV\Rad\34185.E	dd
331339	TC-99	14133-76-7	2.52E+03	pCi/L	2.7E+01	1.8E+02		9.81E+0	00 100.0	TC99_ETVDSK_LS	1.258E-01	L	12/21/2006 21:05	١
Lab Sample Id: 9JJ62010	Client Id: B1L3X4	Test User	Contract Nbr MW6-SBB-A1	<b>SAF Nb</b> S07-011	r <b>Sdg</b> <b>Nbr:</b> W05068	QC Type:		oisture/ olids%*:	Distilled Volume	Sample On Date:		D	ection ate: 006 11:03	
Batch 6331331	Analyte H-3	<b>CAS#</b> 10028-17-8	<b>Result</b> 2.55E+04	Unit pCi/L		TotU 2S 0 1.1E+03	Qual	MDA 3.04E+0	TrcYield 02 100.0	Method 906.0_H3_LSC	<b>Alq Size</b> 5.00E-03	Unit L	Analy Date/Time 12/17/2006 16:22	Act
Lab Sample Id: 9JJ62310	Client Id: B1L3X7	Test User	Contract Nbr MW6-SBB-A1	<b>SAF Nb</b>	or <b>Sdg</b> <b>Nbr:</b> W05068	QC Type:		loisture/ olids%*:	Distilled Volume	Sample On Date:			ection Date: 006 11:49	
Batch 6331331	Analyte H-3	<b>CAS#</b> 10028-17-8	Result 4.44E+03			TotU 2S 3.2E+02	Qual	MDA 3.03E+	TrcYield 02 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Time 12/17/2006 19:06	Ac
Lab Sample Id: 9JJ62610	Client Id: B1L3X1	Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b> E S07-011	or Sdg Nbr: W05068	QC Type:		loisture/ olids%*:	Distilled Volume	Sample On Date:		E	lection Date: 1006 10:15	
Batch 6331331	<b>Analyte</b> H-3	<b>CAS#</b> 10028-17-8	<b>Result</b> 1.78E+04		CntU 2S 4.4E+02		Qual	<b>MDA</b> 3.04E+	TrcYield 02 100.0	Method 906.0_H3_LSC	Alq Size 5.00E-03	Unit L	Analy Date/Time 12/17/2006 20:27	Ac
Lab Sample Id: 9JJ6K210	Client Id: B1L2R8	Test User	Contract Nbr MW6-SBB-A1	<b>SAF NI</b>	or <b>Sdg</b> <b>Nb</b> r: W05068	7.		Moisture/ collds%*:	Distilled Volume	-		I	lection Date: 2006 09:42	
Batch 6331335	<b>Analyte</b> Uranium	<b>CAS#</b> 7440-61-1	Result 2.56E+00	<b>U</b> nit ug/L	CntU 2S 2.7E-01	TotU 2S 2.7E-01	Qual	MDA 8.28E-0	<b>TrcYield</b> 02	Method UTOT_KPA	Alq Size 2.53E-02	Unit ML	Analy Date/Time 01/03/2007 11:03	<b>Ac</b> 3 1
Lab Sample Id: 9JJ6K810	Client : Id: B1L2T4	Test User	Contract Nbr MW6-SBB-A1	<b>SAF N</b>	br Sdg Nbr: W0506	Type		Moisture/ Solids%*:	Distilled Volume	•		f	lection Date: 2006 09:04	
<b>Batch</b> 6331335	<b>Analyte</b> Uranium	<b>CAS#</b> 7440-61-1	<b>Result</b> 4.48E+00	Unit ug/L	CntU 2S 4.7E-01	TotU 2S 4.7E-01	Qual	<b>MDA</b> 8.06E-	TrcYield 02	Method UTOT_KPA	<b>Alq Size</b> 2.60E-02	Unit ML	Analy Date/Time 01/03/2007 11:0	<b>Ac</b> 5 1
Lab Sample Id 9JJ6KT10	Client : Id: B1L2W4	Test User	Contract Nbr MW6-SBB-A1	SAF N	br Sdg Nbr W0506	: Туре		Moisture/ Solids%*:	Distilled Volume				llection Date: 2006 10:29	
Batch 6331335	Analyte Uranium	<b>CAS#</b> 7440-61-1	Result 1.16E+00	Unit ug/L	CntU 2S 1.2E-01	TotU 2S 1.2E-01	Qual	MDA 8.19E-	TrcYield -02	Method UTOT_KPA	Alq Size 2.56E-02	Unit ML	Analy Date/Time 01/03/2007 11:0	1 1

rptFeadRadSummaryEdd v3.48

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDE31AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/20/2006 11:03

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

11/20/2006

Moisture/Solids%\*:

CAS#

QC Type: Case Nbr

BLK

Received Date: File Id

FSuffix RTyp Н

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

SAS Nbr

Decant

**Distilled Volume** 

ΒI

Batch # / Analyt/ Qc Type 6331331 H-3

Result/ Orig Rst -1.29E+01

Tot/Cnt Uncert 2S Unit pCi/L 1.4E+02

Tracer Qu-MDC Yield al 3.06E+02 100.0

Spk Conc/ %Rec

Suffix

Aliq Analy Method Size/ 5.00E-03 906.0 H3 LSC

Analyzed 12/16/2006

RPD/ Date/Time UCL RER/ LCS UCL LCL/UCL Typ

D

BLK 10028-17-8

1.3E+02

L

15:50

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDE31DX

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/20/2006 11:03

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date: **Received Date:** 

11/20/2006

Moisture/Solids%\*:

**Analyt** 

CAS#

Test User Contract Nbr

QC Type: Case Nbr

BLK

Decant

**Distilled Volume** 

File Id

FSuffix RTyp BK H

SAF Nbr

Batch # /

Qc Type

MW6-SBB-A19981 Result/ Orig Rst

5.35E+01

Tot/Cnt Uncert 2S Unit pCi/L 1.4E+02

Qual

Tracer MDC Yield 3.13E+02 100.0

SAS Nbr

Spk Conc/ %Rec

Suffix

Analy Method 906.0 H3 LSC

Date/Time Aliq Size/ Analyzed 5.00E-03 12/17/2006

RPD/ UCL

LCS RER/ UCL LCL/UCL Typ

6331331 H-3 10028-17-8 BLK

1.3E+02

L

06:49

D

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDE81AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 08:19

Client Id:

NA

MW6-SBB-A19981

Matrix:

Case Nbr

WATER

BLK

WATER

Decant

Sample On Date:

11/17/2006

RPD/

Moisture/Solids%\*: Contract Nbr SAF Nbr

7440-61-1

Test User

QC Type:

SAS Nbr

Suffix

Received Date:

FSuffix RTyp File Id

Batch # / Qc Type

6331335

BLK

Result/ Analyt/ Orig Rst CAS# 0.00E+00 Uranium

0.0E+00 0.0E+00

Tot/Cnt Uncert 2S

Qu-MDC al 2.10E-01

Tracer Yield

Spk Conc/ %Rec

Analy Method UTOT\_KPA

Alia Size/ 2.63E-02 ML

**Distilled Volume** 

Date/Time Analyzed 01/03/2007

UCL

RER/ UCL

LCS R LCL/UCL Typ

Н

ВМ

D

10:31

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

WATER

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDF01AB

Sdq/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Received Date:

Client Id:

NA

Matrix:

QC Type:

WATER

Sample On Date:

11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr

BLK SAS Nbr

Tracer

Yield

Decant

Distilled Volume

File Id

RPD/

FSuffix RTyp BP Н

Batch #/ Qc Type

Analyt/ CAS# BETA

Moisture/Solids%\*:

Result/ Orig Rst 1.36E+00

Tot/Cnt Uncert 2S 9.7E-01

Qual MDC 1.78E+00 100.0 Spk Conc/ %Rec

Suffix

Analy Method 9310 ALPHAB

Aliq Date/Time Size/ Analyzed 2.018E-01 12/29/2006

UCL

LCS RER/ UCL LCL/UCL Typ

6331346 12587-47-2 BLK

16:26

D

R

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDF41AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 08:31

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BLK

**Received Date:** 11/17/2006

SAF	SAF Nbr Contract Nbr MW6-SBB-A19981				Case Nbr SAS Nb		SAS Nbr	Suffix	Decant Di	stilled Volume	File	ld		FSuffix RTyp BR H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ
	BE-7	-1.92E+00	pCi/L	2.2E+01	U	4.05E+0	1		GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	13966-02-4			2.2E+01						L.	07:16			
	CO-60	3.40E-01	pCi/L	1.9E+00	U	4.12E+0	0		GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	10198-40-0			1.9E+00						L	07:16			
6331348	CS-134	-5.00E-01	pCi/L	1.9E+00	U	3.48E+0	0		GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	13967-70-9			1.9E+00						L	07:16			
6331348	CS-137	6.84E-01	pCi/L	2.3E+00	U	4.36E+0	0		GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	10045-97-3			2.3E+00						L	07:16			
6331348	EU-152	3.40E+00	pCi/L	5.4E+00	U	1.03E+0	)1	•	GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	14683-23-9			5.4E+00						L	07:16			
6331348	EU-154	-2.68E-01	pCi/L	5.2E+00	U	1.04E+0	)1		GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	15585-10-1			5.2E+00						L	07:16			
6331348	EU-155	-1.43E+00	pCi/L	3.8E+00	U	6.49E+0	00		GAMMALL_GS	2.0004E+00	12/27/2006			D
BLK	14391-16-3			3.8E+00						L	07:16			
6331348	K-40	-6.40E+00	pCi/L	2.7E+01	U	5.85E+0	)1		GAMMALL_GS	2.0004E+00				D
BLK	13966-00-2			2.7E+01						L	07:16			_
6331348		-2.68E+00	pCi/L	2.0E+01	U	3.54E+0	)1		GAMMALL_GS	2.0004E+00				D
BLK	13967-48-1			2.0E+01						L	07:16			
6331348		3.97E+00	pCi/L	5.3E+00	U	1.03E+0	)1		GAMMALL_GS	2.0004E+00				D
BLK	14234-35-6			5.3E+00						L	07:16			

STL Richland rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadiV\Rad\W05068.Edd, h:\Reportdb\edd\FeadiV\Rad\34185.Edd

Lab Sample Id:

JKDFH1AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

13981-37-8

QC Type:

BLK

Received Date:

11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 **Test User** Case Nbr SAS Nbr

Suffix Decant Distilled Volume

File Id

FSuffix RTyp BT Н

Batch # / Analyt/ Qc Type CAS# 6331338 NI-63

BLK

Result/ Orig Rst 6.85E+00

Tot/Cnt Unit Uncert 2S pCi/L 2.9E+00 1.6E+00

Qu-Tracer MDC al Yield 3.53E+00 90.1

Spk Conc/ %Rec

Analy Method NI63 LSC

Aliq Size/ 3.999E-01

Date/Time Analyzed 12/23/2006 RPD/ RER/ UCL UCL

LCS R LCL/UCL Typ

05:24

D

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadiV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDFL1AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 13:02

Client Id:

NA

Matrix:

**WATER** 

WATER

Sample On Date:

11/17/2006

Moisture/Solids%\*:

Analyt/

CAS#

QC Type:

BLK

Received Date:

SAF Nbr

Contract Nbr MW6-SBB-A19981 Case Nbr

SAS Nbr

Suffix Decant Distilled Volume

File Id

FSuffix RTyp BV Н

Batch # /

Qc Type

Result/ Orig Rst

3.67E+00

Tot/Cnt Unit

Test User

Uncert 2S pCi/L 6.0E+00

Qu-Tracer al MDC Yield 9.86E+00 100.0

Spk Conc/ %Rec

Analy Aliq Size/ Method TC99\_ETVDSK 1.254E-01

Analyzed 12/21/2006

Date/Time RPD/ UCL

RER/ LCS R UCL LCL/UCL Typ

D

6331339 TC-99 BLK 14133-76-7

4.2E+00

21:05

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDFR1AB

Sdg/Rept Nbr: W05068

QC Type:

34185

Collection Date: 11/17/2006 13:00

Client Id:

NA

Matrix:

WATER

Sample On Date: **Received Date:** 

11/17/2006

Moisture/Solids%\*:

Analyt/

CAS#

Contract Nbr MW6-SBB-A19981

Result/

Orig Rst

2.20E+00

Case Nbr

BLK

WATER

Decant

Distilled Volume

File Id

FSuffix RTyp ВХ Η

SAF Nbr

Batch # /

Qc Type

Tot/Cnt Uncert 2S

Test User

Qu-Tracer Yield al MDC 9.80E+00 100.0

SAS Nbr

Spk Conc/ %Rec

Suffix

Analy Method TC99\_SEP\_LS 1.259E-01

Date/Time Aliq Size/ Analyzed 12/23/2006

RPD/ UCL

LCS RER/ LCL/UCL Typ UCL

R

6331340 TC-99 BLK 14133-76-7 pCi/L 5.8E+00 4.1E+00

D

06:30

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h;\Reportdb\edd\FeadIV\Rad\W05068.Edd, h;\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDFV1AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

Analyt/

QC Type:

BLK

Received Date:

11/17/2006

SAF Nbr

Contract Nbr

Case Nbr

SAS Nbr

Decant

Distilled Volume

File Id

FSuffix RTyp ΒZ

MW6-SBB-A19981

Result/

Orig Rst

Tot/Cnt

Test User

Qual MDC

Tracer Yield

Spk Conc/ %Rec

Suffix

Analy Method

Aliq Date/Time Size/ Analyzed 12/29/2006

RPD/ UCL

RER/ LCS UCL LCL/UCL Typ

R

Н

Ð

Qc Type CAS# 6331345 ALPHA

Batch # /

1,22E-01 pCi/L 2.9E-01

Unit

6.46E-01 100.0

2.001E-01 9310 ALPHAB

BLK 12587-46-1

2.9E-01

Uncert 2S

L

15:29

STL Richland

 $\alpha$  $\sigma$  rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland OC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDGC1AB

QC Type:

Sdg/Rept Nbr: W05068

Suffix

34185

Collection Date: 11/17/2006 09:46

Client Id:

SAF Nbr

NA

Matrix:

WATER

Sample On Date: Received Date:

11/17/2006

Moisture/Solids%\*:

Contract Nbr Test User MW6-SBB-A19981

Case Nbr

BLK

WATER

**Distilled Volume** 

File Id

FSuffix RTyp CB Н

Batch # / Qc Type

6331351

BLK

Analyt/ CAS# SR-90 10098-97-2

Result/ Orig Rst 1.70E-01

Tot/Cnt Unit Uncert 2S pCi/L 1.9E-01 1.8E-01

Qu-MDC al 3.76E-01 71.5

Tracer Yield

SAS Nbr

Spk Conc/ %Rec

Analy Method SRISO SEP P

Decant

Aliq Size/ 1.0002E+00 12/31/2006

Date/Time RPD/ UCL Analyzed

LCS RER/ UCL

LCL/UCL Typ D

08:18

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

15046-84-1

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDGG1AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Client Id:

NA

Matrix:

QC Type:

WATER

WATER

Sample On Date: Received Date:

11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr

BLK SAS Nbr

Decant

Distilled Volume

File Id

FSuffix RTyp CD

Batch # / Qc Type

BLK

Analyt/ Result Orig Rst CAS# -3.49E-02 6331352 I-129L

Tot/Cnt Unit Uncert 2S 1.5E-01 1.5E-01

Qual MDC 2.67E-01

Tracer Yield 93.0

Spk Conc/ %Rec

Suffix

Analy Method I129LL SEP\_L

Aliq Size/ 3.6871E+00 01/03/2007

Date/Time Analyzed

RPD/ RER/ UCL UCL

LCS R LCL/UCL Typ

Н

D

L 17:01

STL Richland rptFeadRadEdd v3.68 U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JL43T1AB

Sdg/Rept Nbr: W05068 Matrix:

QC Type:

34185

Collection Date: 11/17/2006 11:05

Client ld:

NA

SAS Nbr

WATER

Decant

Sample On Date: Received Date:

11/17/2006

Moisture/Solids%\*:

**Test User** Contract Nbr

Case Nbr

BLK

WATER

Distilled Volume

File Id

FSuffix RTyp CF Н

SAF Nbr

MW6-SBB-A19981

Result/

Orig Rst

Tot/Cnt Uncert 2S

Qu-MDC al

Tracer Yield

Spk Conc/ %Rec

Suffix

Analy Method 1129LL\_SEP\_L

Aliq Analyzed Size/

Date/Time RPD/ UCL RER/ LCS LCL/UCL Typ UCL

Batch #/ Qc Type 6360197 BLK

CAS# 1-129L 15046-84-1

Analyt/

2.0E-01 -2.81E-01

2.0E-01

2.92E-01 90.0 3.4032E+00 01/03/2007

22:46

D

R

29

# STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\W05068.Edd, h:\Reportdb\edd\Fead\V\Rad\34185.Edd

Lab Sample Id:

JMDMG1AB

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Client ld:

NA

Matrix:

WATER

WATER

Sample On Date: Received Date:

11/17/2006

Moisture/Solids%\*: Contract Nbr Test User QC Type: SAS Nbr

Case Nbr

BLK

Decant

**Distilled Volume** 

File Id

FSuffix RTyp CH

SAF Nbr

Batch # /

Qc Type

MW6-SBB-A19981

Result/

Orig Rst

2,51E+00

Tot/Cnt Unit Uncert 2S

Qu-MDC al 2.46E+00

Tracer Spk Conc/ Yield %Rec 100.0

Suffix

Aliq Analy Size/ Method 2.039E-01 9310 ALPHAB

Date/Time Analyzed 01/09/2007

LCS RPD/ RER/ UCL LCL/UCL Typ UCL D

R

Н

7003498 BETA BLK 12587-47-2

Analyt/

CAS#

pCi/L 1.3E+00 1.3E+00

STL Richland rptFeadRadEdd v3.68 U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

# STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

10028-17-8

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDE31CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/20/2006 11:03

Client Id:

NA

Matrix:

QC Type:

WATER

BS

WATER

Sample On Date: Received Date:

11/20/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

SAS Nbr Case Nbr

Suffix

Decant

Distilled Volume

ΒJ H

R

Batch #/ Qc Type

BS

Result Analyt/ Orig Rst CAS# 2.38E+03 6331331 H-3

Tot/Cnt Uncert 2S pCi/L 2.4E+02 2.0E+02

Qu-Tracer MDC Yield 3.05E+02 100.0

Spk Conc/ %Rec 2.72E+03 87.7

Analy Method 906.0 H3\_LSC 5.00E-03

Aliq Size/ 12/16/2006

L

Date/Time RPD/ Analyzed UCL

17:12

File Id

LCS RER/ LCL/UCL Typ UCL 70

D

FSuffix RTyp

# STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDE31EM

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/20/2006 11:03

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date:

11/20/2006

SAF Nbr Contract Nbr		Test User		Case Nbr SAS		SAS Nbr Suffix		Decant Distilled Volume		File Id		FSuffix RTyp			
	MW	6-SBB-A19981												BL	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/U	R CL Typ
6331331	H-3	2.51E+03	pCi/L	2.5E+02		3.12E+02	100.0	2.72E+03	906.0_H3_LS0	5.00E-03	12/17/2006			70	D
BS	10028-17-8			2.1E+02				92.4		L	08:11			130	

ω 2

RICHLAND FormNbr: R

Friday, January 12, 2007

STL Richland QC Control Sample Report

FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample ld:

Moisture/Solids%\*:

7440-61-1

JKDE81CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 08:19

Lab Code: STLRL

Client ld:

NA

Matrix: QC Type:

WATER

BS

WATER

Sample On Date: Received Date:

11/17/2006

SAF Nbr MW6-SBB-A19981

Contract Nbr Test User

Case Nbr

SAS Nbr

Suffix Decant **Distilled Volume** 

File Id

RPD/

FSuffix RTyp

Batch # / Analyt/ Qc Type CAS#

6331335 Uranium

BS

Result/ Orig Rst 3.55E+01

Tot/Cnt Uncert 2S Unit 4.2E+00 4.2E+00

Qu-MDC al 8.22E-02

Tracer Yield

Spk Conc/ %Rec 3.56E+01 99.5

Analy Method UTOT KPA

Date/Time Aliq Size/ 2.55E-02 ML

UCL Analyzed 01/03/2007 10:33

UCL LCL/UCL Typ 70

RER/

D

BN

LCS

Н

# STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDE81DS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 08:19

FSuffix RTvp

Client Id:

NA

Matrix:

Caca Nhr

WATER

WATER

Sample On Date:

File Id

Moisture/Solids%\*:

Toet Hear

QC Type:

BS

SAS Nhr

Decant

Distilled Volume

**Received Date:** 11/17/2006

SAF	MW6-SBB-A19981		'	rest oser		NDI SA	3 NDI	Sumx	Decam	Digition volume	, <b>.</b>			ВО		
Batch # / Qc Type	Analyt∕ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ	
6331335		3.67E+00	ug/L	3.9E-01		8.32E-02		3.57E+00	UTOT_KPA	2.52E-02	01/03/2007			70	D	
BS	7440-61-1		•	3.9E-01				102.8		ML	10:35			130		

Suffix

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

# STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDF01CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date: 11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id FSuffix RTyp

Batch # / Qc Type

Analyt/ Result/ CAS# Orig Rst 6331346 BETA 2.02E+01

Unit

Tot/Cnt Uncert 2S pCi/L 3.4E+00

Qu-MDC al 1.81E+00

Tracer Yield 100.0

Spk Conc/ %Rec 2.28E+01

Analy Method 9310 ALPHAB

Aliq Size/ 2.001E-01

Date/Time Analyzed 12/29/2006

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ

BQ

Н

R

70 D

BS 12587-47-2

1.7E+00

88.4

16:26

130

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

<sup>18</sup> 

# STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

Client Id:

JKDF41CS

NA

Sdg/Rept Nbr: W05068

Matrix:

QC Type:

34185

Collection Date: 11/17/2006 08:31

Sample On Date:

Moisture/Solids%\*:

**WATER** BS

WATER

				The second second											
SAF	-	ontract Nbr /6-SBB-A19981	Т	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix BS	<b>ВТур</b> Н
Batch # / Qc Type 6331348 BS 6331348 BS 6331348 BS	10198-40-0 CS-137 10045-97-3	Result/ Orig Rst 3.08E+01 2.16E+01 6.28E+01	•	Tot/Cnt Uncert 2S 8.4E+00 8.4E+00 6.1E+00 6.1E+00 1.7E+01 1.7E+01	Qu- al	MDC 4.39E+00 4.96E+00 2.51E+01		Spk Conc/ %Rec 3.78E+01 81.3 2.52E+01 86.0 7.61E+01 82.6	Analy Method GAMMALL_G: GAMMALL_G: GAMMALL_G:	L S 1.9999E+00 L	07:16	RPD/ UCL	RER/ UCL	LCS	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDFH1CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

NA

Matrix: QC Type: WATER

BS

WATER

Sample On Date:

Received Date: 11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr SAS Nbr Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp BU Н

R

Batch # / Analyt/ Qc Type

BS

Result/ CAS# Orig Rst 3.14E+02 6331338 NI-63 13981-37-8

Tot/Cnt Uncert 2S pCi/L 2.3E+01 5.0E+00

Qual MDC 3.25E+00 105.2

Spk Conc/ Tracer Yield %Rec 3.83E+02 81.9

Analy Method NI63\_LSC

Aliq Size/ 4.009E-01

Date/Time Analyzed 12/23/2006 RPD/ RER/ UCL UCL

LCS LCL/UCL Typ D 70

L 07:07 130

STL Richland rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, January 12, 2007 STL Richland QC Control Sample Report Lab Code: STLRL FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd Lab Sample Id: JKDFL1CS Sdg/Rept Nbr: W05068 34185 Collection Date: 11/17/2006 13:02 Client Id: NA Matrix: **WATER** WATER Sample On Date: Moisture/Solids%\*: QC Type: BS Received Date: 11/17/2006 SAF Nbr Contract Nbr Test User Case Nbr SAS Nbr Suffix **Distilled Volume** Decant File Id FSuffix RTyp MW6-SBB-A19981 BW Н Batch # / Analyt/ Result/ Tot/Cnt Qu-Tracer Spk Conc/ Analy Alia Date/Time RPD/ RER/ LCS R Qc Type CAS# Orig Rst Unit Uncert 2S al MDC Yield %Rec Method Size/ Analyzed UCL UCL LCL/UCL Typ 6331339 TC-99 4.98E+02 pCi/L 3.9E+01 9.90E+00 100.0 5.49E+02 TC99\_ETVDSK 1.248E-01 12/21/2006 70 D 14133-76-7 BS 1.3E+01 90.7 L 21:05 130

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

Analyt/

CAS#

14133-76-7

TC-99

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDFR1CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 13:00

Client Id:

NA

Matrix: QC Type:

WATER

WATER

Sample On Date:

11/17/2006

SAF Nbr

Contract Nbr

Test User

Case Nbr

BS

Decant Distilled Volume

Received Date:

File Id

Batch # /

Qc Type

6331340

BS

MW6-SBB-A19981

Result/

Orig Rst

4.98E+02

Tot/Cnt

Unit Uncert 2S

1.3E+01

pCi/L 3.5E+01

Qu-MDC 9.76E+00

Tracer Yield 100.0

SAS Nbr

Spk Conc/ %Rec 5.45E+02 91.5

Suffix

Analy Method TC99\_SEP\_LS

Aliq Size/ 1.265E-01

Date/Time RPD/ Analyzed UCL 12/23/2006

06:30

RER/ UCL

LCS LCL/UCL Typ

Н

FSuffix RTyp

BY

70 D 130

STL Richland rptFeadRadEdd v3.68 U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

## STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

12587-46-1

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDFV1CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

NA

Matrix:

QC Type:

WATER

WATER

Sample On Date:

Received Date: 11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User Case Nbr SAS Nbr

BS

Suffix

Decant Distilled Volume

FSuffix RTyp

Batch # / Qc Type

6331345

BS

Analyt/ Result/ CAS# **Orig Rst** ALPHA 1.99E+01

Tot/Cnt Unit Uncert 2S pCi/L 5.1E+00 2.0E+00

Qual MDC 5.15E-01

Tracer Spk Conc/ Yield %Rec 100.0 2.29E+01 87.1

Analy Method 9310\_ALPHAB

Aliq Size/ 2.008E-01

Date/Time RPD/ Analyzed UCL 12/29/2006 17:23

File Id

RER/ UCL

LCS R LCL/UCL Typ 70 D

Н

130

CA

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

Analyt/

CAS#

10098-97-2

SR-90

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JKDGC1CS

Sdg/Rept Nbr: W05068

34185

Suffix

Collection Date: 11/17/2006 09:46

Client ld:

NA

Matrix:

WATER

WATER

Decant

Sample On Date:

11/17/2006

File Id

SAF Nbr

Contract Nbr Test User

QC Type: SAS Nbr Case Nbr

BS

Received Date: Distilled Volume

Batch # /

Qc Type

6331351

BS

MW6-SBB-A19981 Result/

Orig Rst 1.37E+01

Tot/Cnt Unit Uncert 2S pCi/L 2.1E+00 7.2E-01

Qual MDC 4.26E-01

Tracer Spk Conc/ %Rec Yield 1.35E+01 77.6 101.3

Analy Method SRISO SEP P

Date/Time Aliq Analyzed Size/ 1.0009E+00 12/31/2006 10:13

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ

FSuffix RTvp

Н

R

CC

70 D

130

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\V\Rad\W05068.Edd, h:\Reportdb\edd\Fead\V\Rad\34185.Edd

Lab Sample Id:

JKDGG1CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

Received Date:

11/17/2006

SAF		-SBB-A19981	ì	est User	Case	NDF S	Idn ca	Sumx	Decam	Distilled Volume	rue	iu		CE	Н
Batch # / Qc Type 6331352 BS	Analyt/ CAS# I-129L 15046-84-1	Result/ Orig Rst 8.57E+00	Unit pCi/L	Tot/Cnt Uncert 2S 1.1E+00 1.1E+00	Qu- al	<b>MDC</b> 2.55E-01	Tracer Yield 90.9	Spk Conc/ %Rec 1.02E+01 84.2	Analy Method I129LL_SEP_I	Aliq Size/ L 3.7925E+00 L	Date/Time Analyzed 01/03/2007 17:01	RPD/ UCL	RER/ UCL	LCS LCL/UC 70 130	R L Typ D

<sup>25</sup> 

### STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JL43T1CS

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

BS

**Received Date:** 11/17/2006

SAF		ntract Nbr S-SBB-A19981	Т	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix I	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CL Typ
6360197	I-129L	8.90E+00	pCi/L	1.3E+00		4.11E-01	87.9	1.07E+01	I129LL_SEP_I	L 3.5892E+00	01/03/2007			70	D
BS	15046-84-1			1.3E+00				83.3		L	22:47			130	

rptFeadRadEdd v3.68

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland OC Control Sample Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JMDMG1CS

Sdg/Rept Nbr: W05068

BS

SAS Nbr

34185

Collection Date: 11/17/2006 07:00

Client ld:

NA

Matrix: QC Type: WATER

WATER

Sample On Date: Received Date:

11/17/2006

SAF Nbr

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp CI

Н

R

Batch # / Qc Type

7003498

Result/ Analyt/ CAS# Orig Rst 1.69E+01 BETA

pCi/L

Tot/Cnt Uncert 2S 3.0E+00

Qual MDC 2.46E+00 100.0

Spk Conc/ Tracer Yield %Rec 2.30E+01

Analy Method 9310 ALPHAB

Aliq Size/ 1.997E-01

Date/Time Analyzed 01/09/2007

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ D 70

130

12587-47-2 BS

2.1E+00

73.7

L

12:33

STL Richland rptFeadRadEdd v3.68 U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2N91GR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 09:46

Client Id:

B1L6Y4

Matrix:

WATER WATER Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

<b>SAF (</b> W07-0		ntract Nbr 6-SBB-A19981	Т	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix R AV	<b>Тур</b> Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R . Typ
6331351 <b>DUP</b>	SR-90 10098-97-2	7.18E-02 1.15E-01	pCi/L	1.7E-01 1.7E-01	U	3.61E-01	79.0		SRISO_SEP_I	P 1.0045E+00 L	12/31/2006 08:18	46.2 20.0	0.4 3		D

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

#### STL Richland OC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2NX1FR

Sdg/Rept Nbr: W05068

MDC

34185

Collection Date: 11/17/2006 08:19

Client Id:

B1L6W0

Matrix: QC Type:

WATER

WATER

Sample On Date:

11/17/2006

Moisture/Solids%\*:

Analyt/

CAS#

7440-61-1

Contract Nbr

Result/

Orig Rst

5.06E+00

Test User Case Nbr DUP

Decant

Received Date: **Distilled Volume** 

SAF Nbr W07-011

6331335 Uranium

Batch # /

Qc Type

DUP

MW6-SBB-A19981

Tot/Cnt Unit Uncert 2S 5.3E-01

Qual

Tracer Yield

SAS Nbr

Spk Conc/ %Rec

Suffix

Analy Method UTOT\_KPA

Aliq Size/ 2.50E-02

Date/Time Analyzed 01/03/2007

UCL UCL .3

RPD/

LCS LCL/UCL Typ D

FSuffix RTyp

Н

R

3

5.05E+00

5.3E-01

8.38E-02

ML

10:38 20.0

File Id

0.

RER/

AW

STL Richland

rptFeadRadEdd v3.68

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.

#### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2TT1ER

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 13:00

RER/

UCL

Client Id:

B1L715

Matrix: QC Type: WATER

WATER

Sample On Date:

11/17/2006

Moisture/Solids%\*:

Analyt/

Contract Nbr

Case Nbr

DUP

Decant

Received Date:

Distilled Volume

SAF Nbr W07-011

Batch # /

MW6-SBB-A19981

Tot/Cnt

Test User

Qu-Unit Uncert 2S al

Tracer MDC Yield

SAS Nbr

Spk Conc/ %Rec

Suffix

Analy Method

Date/Time Aliq Analyzed Size/ 1,27E-01

RPD/ UCL 6.1

File Id

LCS LCL/UCL Typ

AY

FSuffix RTyp

Н

R

Qc Type CAS# 6331340 TC-99 DUP 14133-76-7

1.16E+01 1.23E+01

Result/

Orig Rst

pCi/L 6.3E+00 4.4E+00

9.72E+00 100.0

TC99 SEP LS

12/23/2006

0.2 20.0 3

D

L 06:30

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2V11KR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

B1L619

Matrix: QC Type: WATER

Sample On Date: WATER

Moisture/Solids%\*:

DUP

<b>SAF 1</b> W07-0		tract Nor -SBB-A19981	lest	User	Case I	Nbr SA	S Nbr	Suffix	Decant	Distilled Volume	File	e Id	1	AZ	тур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst		Tot/Cnt Incert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6331338 <b>DUP</b>	NI-63 13981-37-8	8.12E+02 8.36E+02	pCi/L 5.5 7.8	5E+01 8E+00		3.21E+00	101.6		NI63_LSC	3.992E-01 L	12/23/2006 01:59	3.0 20.0	0.6 3		D

J Oual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2V11LR

Sdg/Rept Nbr: W05068

WATER

34185

Collection Date: 11/17/2006 11:05

Client Id:

B1L619

Matrix:

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

<b>SAF N</b> W07-0		Contract Nbr V6-SBB-A19981	Т	est User	Case	Nbr SA	AS Nbr	Suffix	Decant	Distilled Volume	File	e ld	• (	FSuffix R1 BA	Г <b>ур</b> Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6331345 <b>DUP</b>	ALPHA 12587-46-1	3.33E-01 1.35E+00	pCi/L	1.3E+00 1.3E+00	U	3.27E+00	100.0		9310_ALPHAE	3 7.35E-02 L	12/29/2006 15:29	120.8 20.0	1.1 3		D

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2V11NR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:05

Client Id:

B1L619

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

<b>SAF</b> (		ntract Nbr -SBB-A19981	Т	est User	Case	Nbr S	SAS Nbr	Suffix	Decant I	Distilled Volume	File	e ld		FSuffix R BB	Гур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2\$	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
6360197 <b>DUP</b>	I-129L 15046-84-1	4.06E+01 3.95E+01	pCi/L	4.3E+00 4.3E+00		5.60E-01	86.8		l129LL_SEP_L	3.9137E+00 L	01/03/2007 19:07	2.9 20.0	0.4 3		D

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

## STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2VD1FR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 13:02

Client Id:

B1L799

Matrix:

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

WATER DUP

Received Date:

11/17/2006

SAF	lbr Co	ntract Nbr	T	est User	Case	Nbr SA	S Nbr	Suffix	Decant I	Distilled Volume	File	e Id		FSuffix RT	ур
W07-0	11 MW6	S-SBB-A19981												BC I	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/- UCL	LCS LCL/UCL	R Typ
6331339	TC-99	6.44E+01	pCi/L	1.0E+01		9.89E+00	100.0		TC99_ETVDS	C 1.249E-01	12/21/2006	4.3	0.4	ſ	D
DHP	14133-76-7	6.72E+01		6.0E+00						1.	21:05	20.0	3		

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2W41HR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 08:31

Client Id:

B1L626

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

DUP

<b>SAF</b> (		Contract Nbr W6-SBB-A19981	T	est User	Case	Nbr SA	S Nbr	Suffix	Decant D	istilled Volume	File	e Id		FSuffix F	• •
VV O 7 = (	J 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10661 W-000-00A												BE	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
6331348	BE-7	-1.45E+01	pCi/L	2.6E+01	U	4.47E+01			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	0.5		D
DUP	13966-02-	4 -5.89E+00		2.6E+01						L	07:15	20.0	3		
6331348	CO-60	-2.38E-01	pCi/L	2.2E+00	U	4.46E+00			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	0.		D
DUP	10198-40-	0 -2.24E-01		2.2E+00						L	07:15	20.0	3		
6331348	CS-134	-2.19E+00	pCi/L	3.1E+00	U	5.13E+00			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	1.1		D
DUP	13967-70-	9 2.24E-01		3.1E+00						L	07:15	20.0	3		
6331348	CS-137	1.54E+00	pCi/L	2.3E+00	U	4.75E+00			GAMMALL_GS	1.8827E+00	12/27/2006	66.7	0.5		D
DUP	10045-97-	3 7.67E-01		2.3E+00						L	07:15	20.0	3		
6331348	EU-152	-3.73E-01	pCi/L	5.7E+00	U	1.04E+01			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	0.6		D
DUP	14683-23-	9 -2.93E+00		5.7E+00						L	07:15	20.0	3		
6331348	EU-154	3.67E+00	pCi/L	7.1E+00	Ų	1.52E+01			GAMMALL_GS	1.8827E+00	12/27/2006	878.6	1.2		D
DUP	15585-10-	1 -2.31E+00		7.1E+00						L	07:15	20.0	3		
6331348	EU-155	-3.09E-01	pCi/L	4.6E+00	U	7.98E+00			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	0.9		D
DUP	14391-16-	3 -3.33E+00		4.6E+00						L	07:15	20.0	3		
6331348	K-40	-3.11E+01	pCi/L	5.2E+01	U	1.14E+02			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	0.5		D
DUP	13966-00-	2 -5.14E+01		5.2E+01						L	07:15	20.0	3		
6331348	RU-106	-4.75E+00	pCi/L	2.5E+01	U	4.57E+01			GAMMALL_GS	1.8827E+00	12/27/2006	522.6	0.9		D
DUP	13967-48-	1 1.06E+01		2.5E+01						L	07:15	20.0	3		
6331348	SB-125	-5.09E+00	pCi/L	6.0E+00	U	9.73E+00			GAMMALL_GS	1.8827E+00	12/27/2006	0.0	1.3		D
DUP	14234-35-	6 4.95E-01		6.0E+00						L	07:15	20.0	3		

STL Richland rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland OC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2WR1JR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Client Id:

B1L627

Matrix:

QC Type:

WATER

DUP

WATER

Decant

Sample On Date: Received Date:

11/17/2006

Moisture/Solids%\*:

Contract Nbr

Test User

Case Nbr

Qu-

al

SAS Nbr

Suffix

Distilled Volume

SAF Nbr W07-011

MW6-SBB-A19981 Result

Tot/Cnt

Uncert 2S pCi/L 1.4E-01

Tracer MDC Yield

Spk Conc/ %Rec

Analy Method Aliq Date/Time Size/ Analyzed

RPD/

File Id

RER/ UCL UCL 0.4

LCS R LCL/UCL Typ

FSuffix RTyp

Н

BF

Qc Type 6331352 I-129L DUP

Batch # /

15046-84-1

Analyt/

CAS#

-1.01E-01 -1.44E-01

Orig Rst

1.4E-01

2.35E-01 85.9

1129LL SEP L

3.8297E+00 01/03/2007

0.0

D

20.0 3 15:17

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

#### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2WR3HR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 07:00

Client Id:

B1L627

Matrix: QC Type: WATER

WATER

Sample On Date: Received Date:

11/17/2006

Moisture/Solids%\*:

Contract Nbr

Case Nbr

Qu-

al

DUP SAS Nor

Decant

Distilled Volume

File Id

FSuffix RTyp BG Н

R

D

SAF Nbr W07-011

MW6-SBB-A19981

Result/

Tot/Cnt Unit Uncert 2S

Test User

MDC 2.56E+00 Tracer Spk Conc/ Yield %Rec

Suffix

Analy Method 9310 ALPHAB

Aliq Size/

Date/Time Analyzed

RPD/ RER/ UCL UCL 105.4

LCS LCL/UCL Typ

Qc Type CAS# 7003498 BETA

Batch # /

12587-47-2

Analyt/

Orig Rst 8.79E-01 2.73E-01

pCi/L 1.2E+00 1.2E+00 100.0

1.959E-01

01/09/2007

0.7

DUP

L

12:33

20.0 3

STL Richland

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ6201CR

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/20/2006 11:03

Client Id:

SAF Nbr

Qc Type

B1L3X4

Matrix:

Case Nbr

WATER

WATER

Decant

Sample On Date:

Moisture/Solids%\*:

Contract Nbr

QC Type:

DUP

Received Date:

11/20/2006

MW6-SBB-A19981 S07-011 Batch # / Analyt/

CAS#

Result/ Orig Rst 2.49E+04

Tot/Cnt Uncert 2S Unit pCi/L 1.1E+03

Test User

Qu-MDC Yield ai 3.03E+02

Tracer Spk Conc/ %Rec

Suffix

Analy Method

Alia Size/

Distilled Volume

Date/Time RPD/ Analyzed UCL 12/17/2006

RER/ UCL 8.0

LCS

FSuffix RTyp

Н

R

6331331 H-3 DUP 10028-17-8

2.55E+04

5.2E+02

100.0

SAS Nbr

5.00E-03 906.0 H3 LSC

17:44

2.4

LCL/UCL Typ D

BH

3 20.0

File Id

5

### STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2N21FW

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 08:58

Client Id:

B1L760

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

MS

Received Date:

11/17/2006

				** **											
SAF		Contract Nbr MW6-SBB-A19981	٦	Test User	Case	Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File	ld		FSuffix	,,
W07-0	ווע ווע	10661 W-DOC-0 MIN												AU	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CL Typ
6331335	Uranium	3.49E+01	ug/L	7.1E+00		8.25E-0	2	3.57E+01	UTOT_KPA	2.54E-02	01/03/2007			60	D
MS	7440-61-	1		7.1E+00				97.8		ML	10:44			140	

### STL Richland Oc Matrix Spike Report

MS

SAS Nbr

Lab Code: STLRL

FormNbr: R

Moisture/Solids%\*:

CAS#

14133-76-7

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2PK1EW

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 11:02

RER/

Client Id:

B1L6X0

Matrix: QC Type: WATER

WATER

Sample On Date: Received Date:

11/17/2006

SAF Nbr W07-011

6331340 TC-99

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr

Suffix

Decant

Distilled Volume

File Id

ΑX Н

40

FSuffix RTyp

Batch # / Analyt/

Qc Type

MS

Result

Orig Rst

3.23E+03

Tot/Cnt Unit Uncert 2S pCi/L 2.0E+02

Qu-Tracer ai MDC Yield 9.73E+00 100.0

Spk Conc/ %Rec 3.57E+03

Analy Method TC99 SEP LS

Alia Size/ 1.268E-01

RPD/ Date/Time Analyzed UCL 12/23/2006

UCL LCL/UCL Typ 60

D

LCS

3.1E+01

90.4

06:30

140

STL Richland

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

B Qual- Analyte was found in the associated laboratory blank above the MDC.

### STL Richland Qc Matrix Spike Report

WATER

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05068.Edd, h:\Reportdb\edd\FeadIV\Rad\34185.Edd

Lab Sample Id:

JJ2VN1GW

Sdg/Rept Nbr: W05068

34185

Collection Date: 11/17/2006 12:00

Client Id:

B1L623

Matrix:

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type:

MS

<b>SAF 1</b> W07-0		htract Nbr -SBB-A19981	Т	est User	Case	Nbr S	AS Nbr	Suffix	Decant	Distilled Volume	Fil€	e ld		FSuffix BD	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/U	R CL Typ
6331339 <b>MS</b>	TC-99 14133-76-7	3.46E+03	pCi/L	2.4E+02 3.2E+01		9.70E+00	0 100.0	3.56E+03 97.0	TC99_ETVD\$	< 1.276E-01 L	12/21/2006 21:05			60 140	D

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

Data Review/Verification Checklist SEVERN SIL 1/2/2007 1:50:34 PM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180164; 01/04/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6331345; RALPHA-A Alpha by GPC-Am SDG, Matrix: W05068: WATER 8.0 Correction Calculation Protocol Used Yeş No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples No N/A Yes 8.02 Final Results Are in the Appropriate Activity Units No N/A Yeş 8.03 Batch Contains the Required QC Appropriate for the Method No N/A Yeş 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yeş No N/A 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yeş No N/A 8.06 At Least the Minimum Sample Volume Was Used Yes Nov N/A Analysis Volume => JJ2VN1AC 187.70<200.00 JJ2V11AC 75.10<200.00 JJ2W41AC 146.50<200.00 JJ2XD1AC 125.70<200.00 Q:VB 8.07 The Correct Count Geometry was Used. Yes No N/A OK 80.8 The Sample was Counted for the Minimum Count Time or CRDL was Achieved Yes No N/A OK 8.09 Method Blank is within Control Limits. No N/A  $\bigcirc K$ 8.1 Comments: 8.11 Matrix Blank is within Control Limits Yes No N/Ax No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yes Noy N/A RPD > UCL : 20.0=> JJ2V11AL ALPHA 120.0 (RPD) 8.14 LCS within Control Limits. No N/A OK 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/Ax No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. No N/A OK 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yeş∉ No N/A 18.19 Sample Specific MDC <= CRDL.</p> Yes No N/A MDC/MDA > CRDL => JJ2V11AL ALPHA 3.3E+00>3.0E+00 Q:C1 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag. Yes No N/A No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. Yes No√N/A Batch Positive Result => JJ2XD1AC ALPHA 2.6E+00 L:1.8E+00 8.23 Result <= Action Level, when Defined. Yeş No N/A OK: No Action Level Found => ALPHA OK; No Callin Level Found => ALPHA 8.24 Result + 3s >=0, Not Too Negative. No N/A ΟK NCM 10-09191 STL Richland Page 1 QAS\_RADCALCv4.8.26

STL RICHLAND

	Counting Spectrum are within FWHM Limits.  No FWHM found in Batch Data!	Yes	No	N/
.26	Instruments have Current Calibrations.	Yes	No	N/
.27	' Correct Count Library Used. No Count Library found in Batch Data!	Yes	No	N/
.28	No count closely found in Batch Data! Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later ver	sion <b>Y≲¢s</b>	No	N/A
	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in lat			
	Comments:		ĺ	
.31	Results Blank Subtracted as Appropriate.	Yes	No	M/s
	ОК	J	NO	IN/
		**		
st	Level Review Pam andewsn Date 1-2017			

QAS\_RADCALCV4.8.26 STL RICHLAND Page 2



### Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	6	331345
------------------	---	--------

Yes (√)	No (1)	N/A (√)
		1
		<del> </del>
	1	<del> </del>
		<del>                                     </del>
		<del> </del>
	j	
		<u> </u>

LS-038B, Rev. 10, 8/02

STL RICHLAND 61

## Clouseau Nonconformance Memo



NCM #: 10-09196

NCM Initiated By: Pam Anderson Date Opened: 01/02/2007

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: Alpha by GPC-Am

Lot #'s (Sample #'s): J6K180164 (3),

QC Batches: 6331345

Nonconformance: MDA not met Subcategory: Data accepted

#### Problem Description / Root Cause

Name Pam Anderson

<u>Date</u>

Description

01/02/2007 Due to a slightly higher count rate in the background of the alpha detector the MDA

was not quite met on the duplicate, but it was on the sample itself. The MDA achieved was 3.27 pCi/l. The sample result was >MDA.Data will be accepted.

#### Corrective Action

<u>Name</u>

<u>Date</u>

**Corrective Action** 

Pam Anderson

01/02/2007

Note in case narrative.

#### **Client Notification Summary**

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

#### Quality Assurance Verification

Verified By

**Due Date** 

Status

Notes

This section not yet completed by QA.

#### Approval History

**Date Approved** 

Approved By

Position

Date Printed: 1/2/2007

Data Review/Verification Checklist SEVERN STL 1/9/2007 4:54:11 PM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180164; 01/04/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 7003498; RBETA-SR Beta by GPC-Sr/Y SDG, Matrix: W05068; WATER 8.0 Correction Calculation Protocol Used. Yeş No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yes No N/A 8.02 Final Results Are in the Appropriate Activity Units Yeş No N/A OK 8.03 Batch Contains the Required QC Appropriate for the Method Yeş No N/A OK l8 04 The Correct Tracer and QC Vials Where Used in the Samples Yeş∉ No N/A OK 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yeş No N/A 8.06 At Least the Minimum Sample Volume Was Used Yeş No N/A 8.07 The Correct Count Geometry was Used. Yeş No N/A The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yeş No N/A OK 8.09 Method Blank is within Control Limits No N/A OK 8.1 Comments: |8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). Yeş No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yes No N/A RPD > UCL: 20.0=> JJ2WR3AH BETA 110.0 (RPD) 8.14 LCS within Control Limits. No N/A 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits Yes No N/A No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. Yeş No N/A OK 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yeş No N/A 8.19 Sample Specific MDC <= CRDL. Yes No N/A OK 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag.</p> Yes No N/A No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. No N/A No Positive Results OK 8.23 Result <= Action Level, when Defined.</p> No N/A OK; No Action Level Found => BETA OK; No Callin Level Found => BETA 8.24 Result + 3s >=0, Not Too Negative. No N/A 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data! NCW 10-09241 STL Richland Page 1 QAS\_RADCALCv4.8.26

STL RICHLAND

8.26 Instruments have Current Calibrations.	Yes	No	N/A
8.27 Correct Count Library Used.		No	
No Count Library found in Batch Data!			$\checkmark$
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in			
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be develop	oed in later <b>Véesi</b> o	on <b>Neò</b> .	N/A
8.3 Comments:			
8.31 Results Blank Subtracted as Appropriate.	Yeş	No	N/A
OK	<b>V</b>		
First Level Review Panul On Konson Date 1-10:	9.7		

STL Richland

QAS\_RADCALCv4.8.26 STL RICHLAND Page 2



Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	7003498	
•	WOJU68	

A. Sample Analysis  1. Are the sample yields within acceptance criteria?  2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?		<del></del>	$N/A(\sqrt{)}$
2. Is the sample Minimum Detectable Activity < the Contract			
2. Is the sample Minimum Detectable Activity < the Contract			
	*****		
Detection Limit?			- 1
3. Are the correct isotopes reported?			
B. QC Samples			
<ol> <li>Is the Minimum Detectable Activity for the blank result ≤ the</li> </ol>		1	
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection	}		
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			

Second Level Review Rusyl a Clam. Date:

## Clouseau Nonconformance Memo



NCM #: 10-09241

NCM Initiated By: Pam Anderson Date Opened: 01/10/2007

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: Beta by GPC-Sr/Y

Lot #'s (Sample #'s): J6K180164 (5),

QC Batches: 6331346

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

#### **Problem Description / Root Cause**

Name Pam Anderson Date

**Description** 

01/1<del>0/2007</del> T

The duplicates were out on this batch of beta in water. A recount did not help. The

sample and duplicate were reanalyzed with good results.

#### Corrective Action

<u>Name</u>

Pam Anderson

<u>Date</u> 01/10/2007

**Corrective Action** 

The sample and duplicate were reanalyzed.

#### Client Notification Summary

Client

**Project Manager** 

**Notified** 

Response How Notified

Note

Response

Response Note

#### **Quality Assurance Verification**

Verified By

**Due Date** 

<u>Status</u>

**Notes** 

This section not yet completed by QA.

#### Approval History

**Date Approved** 

Approved By

**Position** 

Date Printed: 1/10/2007

SIVERY STL

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/9/2007 4:54:56 PM

Lot No., Due Date:

J6K180164; 01/04/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6331346; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix:	W05068; WATER	
8.0 Correction Calculat	ion Protocol Used.	Yes No N/A
OK		<b></b>
8.01 The Appropriate N	Methods Were Used To Analyze the Samples	Yes No N/A
	in the Appropriate Activity Units	Yeş No N/A
OK	in the Appropriate Activity Units	
1	e Required QC Appropriate for the Method	Yeş No N/A
OK	o rioquirou do rippropriate let me memes	✓
1	er and QC Vials Where Used in the Samples	Yes No N/A
OK		
8.05 Sample was Appro	opriately Traced Before or After Fractionating the Sample	Yeş No N/A
ОК		<b>V</b> ∶
8.06 At Least the Minim	num Sample Volume Was Used	Yes No N/A
1	JJ2V11AD 77.30<200.00	<b>V</b>
JJ2W41AD 159.70< JJ2XD1AD 140.40<		
8.07 The Correct Coun		Yeş No N/A
OK	r doonleng was book.	<b>√</b> .
	Counted for the Minimum Count Time or CRDL was Achieved.	Yeş No N/A
OK		<b>V</b>
8.09 Method Blank is w	vithin Control Limits.	Yeş No N/A
ОК		· •
8.1 Comments:		
See NCM batch 7003	3498	
8.11 Matrix Blank is wit	hin Control Limits.	Yes No N/A
No Matrix Blanks (ME	·	¥
1	: QAS Limit Value (No B Flag Necessary).	Yea No N/A
OK		You Not N/A
1	plicate Equation Value within Control Limits.	Yes No N/A
HPD > UCL : 20.0=> JJ2WR2AH BETA 1	JJ2WR1AH BETA 180.0 150.0 (RPD)	•
8.14 LCS within Contro	·	Yeş No N/A
OK OK		<b>√</b>
8.15 MLCS within Cont	rol Limits.	Yes No N/A
No Matrix Spikes (ML		. · · · · · · · · · · · · · · · · · · ·
8.16 MS within Control	Limits.	Yes No N/A
No Matrix Spike Sam	ples (MS) found in Batch!	<b>Y</b>
8.17 Tracer within Cont	trol Limits.	Yes No N/A
ок		Variable A1/A
8.18 Samples are abov	e Minimum Tracer Yield (No Failed Samples)	Yes No N/A
OK	roo oppl	Yes No N/A
8.19 Sample Specific M	NDC <= CHDL.	Tes Ng NA
į.	:> JJ2V11AD BETA 4.8E+00>4.0E+00 Q:C1	*
8.2 Comments:		
8.21 Result < Lc, Activi	ty Not Detected 11 Flag	Yes No N/Ax
No Limit Specified!	ty two Dolootoa, O Hag.	
•	ivity Not Detected, U Flag.	Yes Noy N/A
Batch Positive Result	·	<b>V</b>
JJ2VD1AD BETA 1.7		·
JJ2VN1AD BETA 2.	.7E+01 L:2.7E+00	
JJ2V11AD BETA 1. JJ2WR1AD BETA 7		
JUZWATAD DETA	OF OR OF CO.	

STL Richland

Page 1

OAS RADCALCV4.8.26 STL RICHLAND

JJ2W41AD BETA 1.9E+02 L:3.5E+00 JJ2XD1AD BETA 6.1E+02 L:3.9E+00 JJ2WR2AD BETA 6.7E+00 L;2.4E+00

<u> </u>				
8.23	Result <= Action Level, when Defined.	Yeş	No	N/A
	OK; No Action Level Found => BETA	V		
	OK; No Callin Level Found => BETA			
8.24	Result + 3s >=0, Not Too Negative.	Yes	No	N/A
	OK .	V		
8.25	Counting Spectrum are within FWHM Limits.	Yes	No	N/A
Ì	No FWHM found in Batch Data!			V
8.26	Instruments have Current Calibrations.	Yes	No	N/A
8.27	Correct Count Library Used.	Yes	No	N/A
-	No Count Library found in Batch Data!			V
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version	Yès	No	N/A
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later v	Yéesic	) <b>(Add</b> it	N/A
8.3	Comments:			
8.31	Results Blank Subtracted as Appropriate.	Yes	No	N/A
	OK .	V		• • • • • • • • • • • • • • • • • • • •
		•		

First Level Review

Date 1-10-07

STL Richland

QAS\_RADCALCV4.8.26 STL\_RICHLAND

Page 2



Data Review Checklist RADIOCHEMISTRY Second Level Review

OC Batch Number:	6331346
	W05068

Review Item	Yes (√)	No (V)	N/A (√)
A. Sample Analysis	7.50(1)	110(1)	1071(4)
1. Are the sample yields within acceptance criteria?			-
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
Are the correct isotopes reported?			
3. QC Samples			
. Is the Minimum Detectable Activity for the blank result ≤ the	-		
Contract Detection Limit?			
Does the blank result meet the Contract criteria?			
. Is the blank result < the Contract Detection Limit?			
. Is the blank result > the Contract Detection Limit but the sample			
esult < the Contract Detection Limit?			
. Is the LCS recovery with contract acceptance criteria?			<del>                                     </del>
. Is the LCS Minimum Detectable Activity \( \leftarrow\) the Contract Detection			
imit?			
. Do the MS/MSD results and yields meet acceptance criteria?			
. Do the duplicate sample results and yields meet accentance			<del> </del>
ntena?			
. Other			
Are all Nonconformances included and noted?			
Are all required forms filled out?			1
Was the correct methodology used?			
Was transcription checked?			
Were all calculations checked at a minimum frequency?			<del> </del>
Were units checked?			
			1
Comments on any "No" response:			

1 a ale: 1-10-07

SEVERN STL

### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/2/2007 1:55:54 PM

Lot No., Due Date:

J6K180149,J6K180164; 01/04/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6331351; RSR85907 Sr-85/90 by GPC-7

St	PG, Matrix: W05068; WATER			
	D COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	O QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the OC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
ı	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
	Raw Data Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
	Other Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yea	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	¥ <b>∕</b> Yeş	No	N/A

First Level Review

6.0 Comments on any No response:

STL Richland

QAS\_RADCALCv4.8.26 STL\_RICHLAND

Page 1



#### Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	6331351
	WO JOG8

Review Item	Yes (√)	No (V)	N/A (√)
A. Sample Analysis	1		
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	1	<del> </del>	
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			
6. Were units checked?  Comments on any "No" response:			
•			
		·	
•			

LS-038B, Rev. 10, 8/02

STL

## Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

12/27/2006 2:41:27 PM

Lot No., Due Date:

J6K180149,J6K180164; 01/04/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6331348; RGAMMA Gamma by GER

SI	DG, Matrix: W05068; WATER			
	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	OC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	OC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No.	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	Йo	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
	Raw Data Were results calculated in the correct units?	Yea	No	N/A
4.2	Were analysis volumes entered correctly?	Yea	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
	Other Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:	₹		

First Level Review

QAS\_RADCALCV4.8.26 STL RICHLAND

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Date 122766

Page 1

72



QC Batch Number:	63313451
	W05068

	Yes (√)	No (V)	N/A (√)
A. Sample Analysis		+110(1)	11/21(4)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract		1	<del> </del>
Detection Limit?			
3. Are the correct isotopes reported?			
3. QC Samples			<del> </del>
. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
. Does the blank result meet the Contract criteria?			
. Is the blank result < the Contract Detection Limit?			
. Is the blank result > the Contract Detection Limit but the sample			
esult < the Contract Detection Limit?			
. Is the LCS recovery with contract acceptance criteria?		1	
. Is the LCS Minimum Detectable Activity < the Contract Detection			
amit?			1
. Do the MS/MSD results and yields meet acceptance criteria?			
. Do the duplicate sample results and yields meet acceptance			
nteria?			
C. Other			
Are all Nonconformances included and noted?			
Are all required forms filled out?			
Was the correct methodology used?			
Was transcription checked?			
Were all calculations checked at a minimum frequency? Were units checked?			

Data Review/Verification Checklist SEVERN STL 1/8/2007 4:23:48 PM TIKENILI RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180164; 01/04/2007 W05068 Client, Site: 384868; QC Batch No., Method Test: 6331352; RGAMLEPS Gamma by LEPS SDG, Matrix: "; WATER 1.0 COC 1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A 2.0 QC Batch 2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? No N/A 2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A 2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A 2.4 Does the Worksheets include a Tracer Vial label for each sample? No N/A 3.0 QC & Samples 3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A 3.2 Is the LCS result, yield, and MDA within contract limits? No N/A 3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A/ 3.4 Are the duplicate result, yields, and MDAs within contract limits? Yeş No N/A 3.5 Are the sample yields and MDAs within contract limits? No N/A 4.0 Raw Data 4.1 Were results calculated in the correct units? No N/A 4.2 Were analysis volumes entered correctly? Yes No N/A 4.3 Were Yields entered correctly? Yes No N/A Yeş No N/A

4.4 Were spectra reviewed/meet contractual requirements?

4.5 Were raw counts reviewed for anomalies?

5.0 Other

5.1 Are all nonconformances included and noted?

5.2 Are all required forms filled out?

5.3 Was the correct methodology used?

5.4 Was transcription checked?

5.5 Were all calculations checked at a minimum frequency?

5.6 Are worksheet entries complete and correct?

6.0 Comments on any No response:

First Level Review

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Date 1-9-07

STL Richland QAS\_RADCALCv4.8.26 STL RICHLAND

Page 1

YeşrNoN/A

Yes No N/A

Yeş No N/A

Yeş No N/A

Yes No N/A

Yeş No N/A

Yes No N/A



Review Item	Yes (√)	No (1)	N/A (√)
A. Sample Analysis	<u> </u>		
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?			
3. Are the correct isotopes reported?		<u> </u>	
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			ļ
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?	/_		
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?	//		
6. Were units checked?			

Second Level Review Date: 1-9-07

LS-038B, Rev. 10, 8/02

Data Review/Verification Checklist SEVERN STL 1/8/2007 4:22:17 PM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180164: 01/04/2007 Client, Site: 384868; QC Batch No., Method Test: 6360197; RGAMLEPS Gamma by LEPS WOJOGP SDG. Matrix: .: WATER 11.0 COC 1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A 2.0 QC Batch 2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? No N/A Yes 2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A 2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A 2.4 Does the Worksheets include a Tracer Vial label for each sample? No N/A 3.0 QC & Samples 3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A 3.2 Is the LCS result, yield, and MDA within contract limits? No N/A 3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A 3.4 Are the duplicate result, yields, and MDAs within contract limits? No N/A 3.5 Are the sample yields and MDAs within contract limits? No N/A 4.0 Raw Data 4.1 Were results calculated in the correct units? No N/A 4.2 Were analysis volumes entered correctly? Yeşr No N/A 4.3 Were Yields entered correctly? Yes No N/A 4.4 Were spectra reviewed/meet contractual requirements? No N/A 4.5 Were raw counts reviewed for anomalies? No N/A 5.0 Other 5.1 Are all nonconformances included and noted? Yes No N/A 5.2 Are all required forms filled out? Yeş No N/A |5.3 Was the correct methodology used? Yeş No N/A 5.4 Was transcription checked? Yes No N/A 5.5 Were all calculations checked at a minimum frequency? Yes No N/A 5.6 Are worksheet entries complete and correct? Yes No N/A 6.0 Comments on any No response:

First Level Review

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STL Richland QAS RADCALCV4.8.26

Page 1



QC Batch Number:	436	01	19	7
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) No (√)	N/A (√)
	<del> </del>
	<del>                                     </del>
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Comments on any "No" response:	
, <u> </u>	

Second Level Review

Date: 1-8-07

Data Review/Verification Checklist SEVERN STL 12/26/2006 3:24:01 PM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180149; 01/04/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6331340; RTC99 Tc-99 by LSC SDG, Matrix: W05068; WATER 8.0 Correction Calculation Protocol Used. No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yes No N/A 8.02 Final Results Are in the Appropriate Activity Units Yes∀No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yes No N/A 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yes No N/A Incorrect Tracer/Vial => JJ2PK1AE TCSG<>TCSE Q:V9 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yeş No N/A 8.06 At Least the Minimum Sample Volume Was Used Yeş No N/A OK 8.07 The Correct Count Geometry was Used. No N/A 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yeş No N/A 8.09 Method Blank is within Control Limits. Yes No N/A OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). Yeş No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yeş No N/A OK (RPD) 8.14 LCS within Control Limits. Yeş No N/A OK 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/A 8.17 Tracer within Control Limits. Yes No N/A No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! 8.19 Sample Specific MDC <= CRDL. Yeş No N/A OK 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag. Yes No N/A No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. No N/A No Positive Results

8.24 Result + 3s >=0, Not Too Negative.

OK

8.25 Counting Spectrum are within FWHM Limits.

No FWHM found in Batch Data!

Yeş No N/A

OK Calc\_IDL Not Calculated

8.23 Result <= Action Level, when Defined

OK; No Action Level Found => TC-99

OK; No Callin Level Found => TC-99

 STL Richland
 Page 1

 QAS\_RADCALCV4.8.26
 STL\_RICHLAND

8.26 Instruments have Current Calibrations.	V-2 No ALA
	Yes No N/A
<ul> <li>8.27 Correct Count Library Used.</li> <li>No Count Library found in Batch Data!</li> <li>8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be</li> </ul>	Yes No N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version.	
8.3 Comments:	
8.31 Results Blank Subtracted as Appropriate. OK	Yes No N/A
irst Level Review Pan Anderson Date	123606

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QAS\_RADCALCv4.8.26 STL RICHLAND Page 2



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# Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:

6351346 womes

A AAAAAA	and the second s		Comments on any "No" response:
			6. Were units checked?
			5. Were all calculations checked at a minimum frequency?
			4. Was transcription checked?
		\	3. Was the correct methodology used?
			2. Are all required forms filled out?
\			1. Are all Nonconformances included and noted?
			C. Other
		\	criteria?
	and the second s		9. Do the duplicate sample results and yields meet acceptance
			8. Do the MS/MSD results and yields meet acceptance criteria?
		\	Limit?
			7. Is the LCS Minimum Detectable Activity \le the Contract Detection
		\	2. Is the LCS recovery with contract acceptance criteria?
\			result < the Contract Detection Limit?
		- Assessment Assessment	4. Is the blank result > the Contract Detection Limit but the sample
	1		3. Is the blank result < the Contract Detection Limit?
			2. Does the blank result meet the Contract criteria?
		\	Contract Detection Limit?
			1. Is the Minimum Detectable Activity for the blank result < the
A STATE OF THE PERSON OF THE P		The second secon	B. QC Samples
		1	3. Are the correct isotopes reported?
,		\	Detection Limit?
- Andrews - Marine Commission - Andrews - Andr			2. Is the sample Minimum Detectable Activity < the Confract
	-,,-	\	1. Are the sample yields within acceptance criteria?
			A. Sample Analysis
N/A Z/	No (V)	Yes (V)	Review Item
			The second secon

Second Level Review Date: 12-06

STL RICHLAND

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### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

12/22/2006 2:16:06 PM

Lot No., Due Date:

J6K180149,J6K180164; 01/04/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 6331339; RTC99 Tc-99 by LSC

SD	PG, Matrix: W05068; WATER			
	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Ye	y No	N/A
<b>2.0</b> 2.1	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Ye	a No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Ye	y No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	¥ Ye	y No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Ye	y No	N/A
	QC & Samples Is the blank results, yield, and MDA within contract limits?	Ye	y No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Ye Ye	y No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Ye	y No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Ye	y No	N/A
3.5	Are the sample yields and MDAs within contract limits?	<b>₹</b> Ye	y No	N/A
	Raw Data Were results calculated in the correct units?	Ye	y No	N/A
4.2	Were analysis volumes entered correctly?	<b>V</b> Ye	y No	N/A
4.3	Were Yields entered correctly?	<b>∀</b> Ye	s No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Ye	y No	N/A
4.5	Were raw counts reviewed for anomalies?	Ye	y No	N/A
	Other 1. 1 1997 A Secretary of the second of	Ye	s No	N/A
5.2	Are all required forms filled out?	Ye	g No	N/A
5.3	Was the correct methodology used?	Ye.	y No	N/A
.4	Was transcription checked?	Ye	y No	N/A
5.5	Were all calculations checked at a minimum frequency?	<b>∜</b> Ye	a No	N/A
.6	Are worksheet entries complete and correct?	Ye.	ş No	N/A
: n	Comments on any No response:	¥	,	

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Date

STL Richland

QAS\_RADCALCv4.8.26

Page 1



QC Batch Number:	6331339

Review Item	Yes (√)	No (V)	N/A (V)
A. Sample Analysis		1	1072(1)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?		The same of the sa	
3. Are the correct isotopes reported?			
B. QC Samples			
<ol> <li>Is the Minimum Detectable Activity for the blank result ≤ the</li> </ol>			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?		<del>                                     </del>	+
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection		1	
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance		·	
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?		1	<u> </u>
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			<del> </del>
Comments on any "No" response:			
A CONTRACT OF THE PARTY OF THE			- Annual Control of the second
		The same and the s	
Second Level Review Though a Ols		Date: 🖊	<u> </u>

Data Review/Verification Checklist SEVERN STL 12/26/2006 3:14:12 PM RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180149, J6K180164, J6K210263; 01/04/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6331331; RTRITIUM H-3 by LSC SDG. Matrix: W05068; WATER 8.0 Correction Calculation Protocol Used. Yes No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yeş No N/A 8.02 Final Results Are in the Appropriate Activity Units Yeşr No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yeşr No N/A 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yeş No N/A 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample No N/A 8.06 At Least the Minimum Sample Volume Was Used Noy N/A Analysis Volume => JJ2NX1AA 5.00<10.00 JJ2N21AA 5.00<10.00 OF JJ2N91AA 5.00<10.00 JJ2PK1AA 5.00<10.00 12.26-06 JJ2TP1AA 5.00<10.00 JJ2TT1AA 5.00<10.00 JJ2VD1AA 5.00<10.00 JJ2VN1AA 5.00<10.00 JJ2V11AA 5.00<10.00 JJ2WH1AA 5.00<10.00 JJ2WR1AA 5.00<10.00 JJ2W41AA 5.00<10.00 JJ2XD1AA 5.00<10.00 JJ6201AA 5.00<10.00 JJ6231AA 5.00<10.00 JJ6261AA 5.00<10.00 Q:VB 8.07 The Correct Count Geometry was Used. Yes No N/A Count Geometry => JKDE31AF SVP15/5<>SVP10/10 JKDE31AG SVP15/5<>SVP10/10 JKDE31AA SVP15/5<>\$VP10/10 JKDE31AC SVP15/5<>SVP10/10 JJ2NX1AA SVP15/5<>SVP10/10 12.26-06 JJ2N21AA SVP15/5<>SVP10/10 JJ2N91AA SVP15/5<>SVP10/10 JJ2PK1AA SVP15/5<>SVP10/10 JJ2TP1AA SVP15/5<>SVP10/10 JJ2TT1AA SVP15/5<>SVP10/10 JJ2VD1AA SVP15/5<>SVP10/10 JJ2VN1AA SVP15/5<>SVP10/10 JKDE31AH SVP15/5<>SVP10/10 JKDE31AD SVP15/5<>SVP10/10 JKDE31AE SVP15/5<>SVP10/10 JJ2V11AA SVP15/5<>SVP10/10 JJ2WH1AA SVP15/5<>SVP10/10 JJ2WR1AA SVP15/5<>SVP10/10 JJ2W41AA SVP15/5<>SVP10/10 JJ2XD1AA SVP15/5<>SVP10/10 JJ6201AA SVP15/5<>SVP10/10 JJ6201AC SVP15/5<>SVP10/10 JJ6231AA SVP15/5<>SVP10/10 JJ6261AA SVP15/5<>SVP10/10 Q:VC 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. No N/A 8.09 Method Blank is within Control Limits. Yes No N/A OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. No N/A OK STL Richland Page 1 QAS RADCALCV4,8,26

STL RICHLAND

		,	en manual de la company de		***********
8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary).	***************************************		Yeş	× No	N/A
OK OK			V	140	FN/2
3.13 QAS Specified Duplicate Equation Value within Control Limits. OK (RPD)			Yes	No.	N/A
3.14 LCS within Control Limits.			Yeş	No	N/A
OK 3.15 MLCS within Control Limits.			V		
OK			Yes	No	N/A
.16 MS within Control Limits.			Yes	No	N/A
No Matrix Spike Samples (MS) found in Batch!  1.17 Tracer within Control Limits.			V	NI.	V
No Tracers found in Batch!			Yes	No	N/F
.18 Samples are above Minimum Tracer Yield (No Failed Samples)			Yes	No	N/A
No Tracers found in Batch!  19 Sample Specific MDC <= CRDL.			Van	N.	V
OK			Yes	INO	N/A
.2 Comments:			,		
.21 Result < Lc, Activity Not Detected, U Flag.			Vac	No	N/A
No Limit Specified!			103	NO	7
22 Result < Mdc, Activity Not Detected, U Flag. No Positive Results			Yea	No	N/A
OK Calc_IDL Not Calculated			V		
23 Result <= Action Level, when Defined. OK: No Action Level Found => H-3			Yes	No	N/A
			V		
OK; No Callin Level Found => H-3 24 Result + 3s >=0, Not Too Negative.					
OK			Yes	No	N/A
25 Counting Spectrum are within FWHM Limits.			Yes	No	N/A
No FWHM found in Batch Data! 26 Instruments have Current Calibrations.			V		V
			Yes	No	N/A
27 Correct Count Library Used.			Yes	No	N/A
No Count Library found in Batch Data! 28 Instrument Background within Limits at Time of Counting. (Not Applicable to this	version To be	developed in later ver	eion <b>tó</b> ac	Na	NI/A
29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to	o this version. T	o be developed in lat	erwiensio	)(MEQ).	N/A
3 Comments:					
Results Blank Subtracted as Appropriate.			V + =/	<b>51.</b> .	A1/A
OK			Yes	No	N/A
			*		
st Level Review Pan anderson	_ Date _	12.24.0/			
Richland					
S_RADCALCv4.8.26			Page 2	2	

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QC Batch Number:	6331331
	W05048

Review Item	Yes (√)	No (V)	N/A(V)
A. Sample Analysis		1.0(1)	11/21(4)
1. Are the sample yields within acceptance criteria?		-	a di come
2. Is the sample Minimum Detectable Activity < the Contract	<del> </del>		
Detection Limit?		The state of the s	
3. Are the correct isotopes reported?			
B. QC Samples	-	<del></del>	-
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
esult < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			+
. Is the LCS Minimum Detectable Activity < the Contract Detection		<u> </u>	
.imit?			
. Do the MS/MSD results and yields meet acceptance criteria?			+
. Do the duplicate sample results and yields meet accentance			·
ntena?			
C. Other		<del></del>	·
. Are all Nonconformances included and noted?			
. Are all required forms filled out?			<del> </del>
. Was the correct methodology used?			<u> </u>
. Was transcription checked?	— ————————————————————————————————————		
. Were all calculations checked at a minimum frequency?			
. Were units checked?		***************************************	<del> </del>
. Were units checked?  Comments on any "No" response:			
And the second s			. maranara (1

Second Level Review Review Result a Rolling Date: 12-27-06

Data Review/Verification Checklist SEVERN 12/27/2006 2:44:41 PM STL RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6K180164; 01/04/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 6331338; RNI63 Ni-63 by LSC SDG, Matrix: W05068; WATER No N/A Yeş 8.0 Correction Calculation Protocol Used. Yeş No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Final Results Are in the Appropriate Activity Units Yeş No N/A 8.02 8.03 Batch Contains the Required QC Appropriate for the Method No N/A OK No N/A 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yeş OK Yeş No N/A 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample OK Yeş No N/A 8.06 At Least the Minimum Sample Volume Was Used OK Yeş No N/A 8.07 The Correct Count Geometry was Used. OK 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yes No N/A Yeş No N/A 8.09 Method Blank is within Control Limits OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! Yeş No N/A 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yeş OK (RPD) 8.14 LCS within Control Limits. Yeş∕ No N/A 8.15 MLCS within Control Limits. Yes Νo N/A No Matrix Spikes (MLCS) found in Batch! Yes No N/A 8.16 MS within Control Limits. No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. Yes No N/A No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! No N/A 8.19 Sample Specific MDC <= CRDL. Yes ΘK 8.2 Comments: Yes No N/A 8.21 Result < Lc, Activity Not Detected, U Flag.</p> No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. No N/A No Positive Results OK Calc\_IDL Not Calculated No [8.23 Result <= Action Level, when Defined. N/A OK; No Action Level Found => NI-63 OK; No Callin Level Found => NI-63 8.24 Result + 3s >=0, Not Too Negative. No N/A 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data! STL Richland Page 1 OAS\_RADCALCV4.8.26 STL\_RICHLAND ΩK

8.26	Instruments have Current Calibrations. Ye	s N	0	N/A
	No Count Library found in Batch Data!			$\checkmark$
		B-O ISNO	<b>.</b> .	13/ 24
8.31	Hesults Blank Subtracted as Appropriate.  OK	≱ Ni	0	N/A
	count Library tound in Batch Datal strument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later vestrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in Imments:  ssults Blank Subtracted as Appropriate.			
		wits at Time of Counting. (Not Applicable to this version. To be developed in later version  No N/A Limits at the Time of Counting. (Not Applicable to this version. To be developed in later version  No N/A propriate.  Yes No N/A  Yes No N/A		
Firs	t Level Review Van Underson Date 12 27-06			

STL Richland

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QC Batch Number:	6331338
	WO 2068

Review Item	Yes (√)	No(V)	$N/A(\sqrt{)}$
A. Sample Analysis		1	T
1. Are the sample yields within acceptance criteria?		1	
2. Is the sample Minimum Detectable Activity < the Contract		1	
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples		1	
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
enteria?		out of the control of	
C. Other			<u> </u>
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			<del> </del>
4. Was transcription checked?			<del> </del>
. Were all calculations checked at a minimum frequency?			
6. Were units checked?			· · · · · · · · · · · · · · · · · · ·

Comments on any "No" response:	

Therefla alam Date: 12-28-06

SEVERN FEELST	STL	
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#### Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/8/2007 4:21:07 PM

Lot No., Due Date:

J6K180149, J6K210219; 01/04/2007

Client, Site:

384868:

QC Batch No., Method Test: 6331335; RUNAT UNat by KPA

SDG, Matrix:

,,,,,,W05068; WATER

4	.0	C	$\sim$	$\sim$
•	.u	·	u	u

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

#### 2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yeş No N/A Yeş No N/A

2.2 Are the QC appropriate for the analysis included in the batch?

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yeş No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yes No N/A

3.0 QC & Samples
3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yeş No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

|3.5 Are the sample yields and MDAs within contract limits?

Yeş∕NoN/A

#### 4.0 Raw Data

5.0 Other

4.1 Were results calculated in the correct units?

Yes No N/A

4.2 Were analysis volumes entered correctly?

Yes No N/A Yes No N/A

4.3 Were Yields entered correctly?

No N/A

4.4 Were spectra reviewed/meet contractual requirements?

Yeş No N/A

4.5 Were raw counts reviewed for anomalies?

Yeş No N/A

5.1 Are all nonconformances included and noted?

Yeş No N/A

5.3 Was the correct methodology used?

Yeş No N/A Yeş No N/A

5.4 Was transcription checked?

5.2 Are all required forms filled out?

Yeş No N/A

5.5 Were all calculations checked at a minimum frequency?

5.6 Are worksheet entries complete and correct?

Yeşr No N/A

6.0 Comments on any No response:

See NCM. 10.09218 10.-6923/

Janu anderson First Level Review STL Richland

Date \_/- 9- 0.7



QC Batch Number: U22/030			
W05068			
- 0.047			
Review Item	T 77 (7)	157 (15	
A. Sample Analysis	Yes (√)	No (√)	$N/A(\sqrt{)}$
		***************************************	
<ol> <li>Are the sample yields within acceptance criteria?</li> <li>Is the sample Minimum Detectable Activity &lt; the Contract</li> </ol>			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
	f		
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?			
Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?		<u> </u>	
4. Is the blank result > the Contract Detection Limit?	-		1
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?	<del> </del>		1
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection		ļ	
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?	ļ		
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			<del> </del>
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			
o. Were difficience and the second		<u>L</u>	
Comments on any "No" response: Det A ( CM			
Comments on any "No" response:			
			****
. A			
Second Level Review: Review Review Review			
Second Level Review: Review Cla	~~~	Data	1-9-07
Total Trois	—	Date:	
U			

LS-038B, Rev. 10, 8/02

#### Clouseau Nonconformance Memo



NCM #: 10-09218

NCM Initiated By: Pam Anderson

Date Opened: 01/05/2007

Date Closed:

Classification: Anomaly

Status: CHREVIEW

Production Area: Counting

Tests: UNat by KPA

Lot #'s (Sample #'s): J6K180119 (1), J6K180199

(1,2,3), J6K270000 (224), J6L110171 (1), J6L120154 (2), J6L120229 (1,2), J6L120243 (1,2,3), J6L120248 (1,2,3,4,5),

J6L120325

(1,10,11,12,2,3,4,5,6,7,8,9)

J6L130000 (316,378,449),

QC Batches: 6331224, 6347316, 6347378,

6347449

Nonconformance: Other (describe in detail) Subcategory: Other (explanation required)

#### Problem Description / Root Cause

Name

**Date** 

Description

Pam Anderson 01/05/2007 The blank needed recounting in all these total uranium batches. The blanks read very low, at 0 ug/L. All the parameters were not met. The blanks were recounted and

a matrix spike added to the sample on a second count to meet the parameters. Data

accepted.

#### Corrective Action

Name

Date

**Corrective Action** 

Pam Anderson

01/05/2007

The tech was given further training on the KPA counting.

#### Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

#### **Quality Assurance Verification**

Verified By

**Due Date** 

This section not yet completed by QA.

**Notes** 

#### Approval History

Date Approved

Approved By

Position

Date Printed: 1/5/2007

Page 1 of 1

#### Clouseau Nonconformance Memo



NCM #: 10-09236

NCM Initiated By: Pam Anderson

Date Opened: 01/09/2007

Date Closed:

Classification: Anomaly

Status: GLREVIEW

Production Area: Environmental - Sep

Tests: UNat by KPA

Lot #'s (Sample #'s): J6K180149 (4,5),

QC Batches: 6331335

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

#### **Problem Description / Root Cause**

Name Pam Anderson <u>Date</u> 01/09/2007

Description

7 Two uranium samples being counted on the KPA had results greater than the

calibration limit. They had to be recounted with a smaller aliquot. Recount

acceptable.

#### **Corrective Action**

<u>Name</u>

Date

**Corrective Action** 

Pam Anderson

01/09/2007

The tech was given further training on requirements for KPA acceptance.

#### **Client Notification Summary**

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

#### Quality Assurance Verification

Verified By

Due Date

Status

**Notes** 

This section not yet completed by QA.

#### Approval History

Date Approved

Approved By

Position

Date Printed: 1/9/2007

PNNEJLA -	118014 00506	198	-07	Cŀ	IAIN OF	CUSTODY/	SAMPLE AN	ALYSIS R	EQUEST			07-011-1 1 of 1	.26
Collector DUAN	BC				Contact/R				Telephone No.	MSU			
SAF No.	<u> </u>		7		Dot Stev Sampling		Water Company		509-376-5056 Purchase Order/	Change Code			
W07-011		·····			Hanford		· , , , , , , , , , , , , , , , , , , ,	PM. 4		Charge Code	t		
Project Title RCRA, NOVEM	IBER 2006				Tr.	NF-4-500	(		Ice Chest No.	06	Temp.		
Shinned To (Lah)						Shipment			Bill of Lading/Ai	ir Bill No.			
Severn Trent Inc Protocol RCRA	cornorated, Ric	hland		namuniká, vyvikára provinská dnáh i i i i i i i i i i i i i i i i i i i	Goyt, Ve		ority: 45 Days	***	Offsite Property	No.			
POSSIBLE SAMI  ** ** Contains Ra releasable per DOE Of	dioactive Materia	al at co	ncentrations tha	t are not regulated for	transportation per 49	9 CFR but are not	SPECIAL INSTRUCT All Labs except WSCF: E closure of 14 days. WSCF: Batch all PNNL (	Batch all PNNL sample		G, I, S, and W 07		on: Yes 🗹 N	
Sample No.	Lab ID	*	Date	Time No	/Type Container		Sa	mple Analysis				Preservative	T
B1L6W0		W	11/17/6	0619 1x	20-mL P	Activity Scan				None			
B1L6W0		W		1 12	500-mL G/P	UTOT_KPA: Urar	ium (1)	····		HNO3 to pH <2	)		
B1L6W0		W		3x	1000-mL G/P	TC99_SEP_LSC:	Tc-99 (1)			HCl to pH <2			
B1L6W0		W		1x-	1000-mL G/P	GAMMALL_GS: L	ist-1 (9)			HNO3 to pH <2	· · · · · · · · · · · · · · · · · · ·		
B1L6W0		W	4	1x	1000-mL P	906.0_H3_LSC: T	ritium (1)			None			
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		<del> </del>						**************************************					
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Relinquishe A			Sign	70V 17	Date/Time	Received By /	Print	Sign	Date/Time	4:40	Ma	atrix *	
Relinquished By		184	HU		Date/Time	Received By	h.J.dmiTI-1	NOV 17	Date/Time	SE = SO = SL =	Soil Sediment Solid Sludge		
Relinquished By					Date/Time	Received By			Date/Time	W =	Water Oil Air	T. = T.ia	anid egetation

FINAL SAMPLE DISPOSITION

Relinquished By

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

Received By

Disposed By

Date/Time

Date/Time

PNNLJL/ L Collector DUPA	418015 20506 001-01	19 8 1-0	7		CHAIN OF	CUSTODY/	SAMPLE ANALY	SIS REQUEST	C.O.C. #	W07-011-94		
Collector DURA	EK NI				Contact/R		W-10	Telephone No.	MSIN	FAX		
SAF No. W07-011					Dot Stev Sampling 6 Hanford	Origin		509-376-5056 Purchase Order/Chai	rge Code			
Project Title RCRA, NOVEM	BER 2006		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			エスケーエーリ	C6-1	Ice Chest No. 04	O Temp	•		
Shinned To (Lab) Severn Trent Inc		hland			Method of Goyt, Ve	Shipment		Bill of Lading/Air Bil	· · · · · · · · · · · · · · · · · · ·			
Protocol RCRA	· · · · · · · · · · · · · · · · · · ·	11161111.		**************************************	CROVI. VE		ority: 45 Days	Offsite Property No.				
POSSIBLE SAME ** ** Contains Ra- releasable per DOE On	lioactive Materia	al at con	centrations that	are not regulat	ed for transportation per 49	9 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PN closure of 14 days. WSCF: Batch all PNNL GW sample	Hold Time INL samples submitted under A, G, I, s submitted into one SDG, daily closur	S, and W 07 SAFs into	mption: Yes V No one SDG, not to exceed SDG		
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Ana	lysis		Preservative		
B1L760		W	11/17/50	<i>0</i> 858	1x20-mL P	Activity Scan		None	e			
B1L760		W			1x500-mL P	TC99_ETVDSK_L	SC: Tc-99 (1)	нсі	to pH <2			
B1L760		W			1x500-mL G/P	UTOT_KPA: Uran	ium (1)	HNC	HNO3 to pH <2			
B1L760		W		1,	1x4Q00-mL G/P	GAMMALL_GS: L	ist-1 (9)	HNC	HNO3 to pH <2			
B1L760		W	Ą	*	1x1000-mL P	906.0_H3_LSC: T	ritium (1)	None	9			
							JJ2	NZ				
		-										
**************************************			1,,,,,									
7/00/4												
	1											
Relinquished		12	W.	IV 17 2		Received By Smit	h S. Sn. 77 NOV	17 2006 Date/Time	S = Soil	Matrix *  DS = Drum Soli		
Relinquished By					Date/Time	Received By		Date/Time	SE = Sediment SO = Solid SL = Sludge	DI = Drim Lion T = Tissue WI = Wine		
Relinquished By					Date/Time	Received By		Date/Time	W = Water O = Oil A = Air	L = Liquid V = Vegetation X = Other		
Relinquished By		····			Date/Time	Received By	,	Dots/Time	1			

Date/Time

Date/Time

Disposed By

Received By

Date/Time

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

FINAL SAMPLE DISPOSITION

PNNL JG A	1/8014 00506	19	07			CHAI	N OF (	CUSTODY/S	SAMPLE ANAI	LYSIS R	EQUEST	,	C.O.C.	W07-0	11-220
Collector Dura	EK		1				Contact/Re	quester			Telephone No.		MSIN	FAX	
F. M. H SAF No.	81					····	Dot Stew Sampling C				509-376-5056 Purchase Order		d a		
W07-011							Hanford			.,			ue		
Project Title RCRA, NOVEM	(DED 2004						HNI	= - N - 500	» ··· (		Ice Chest No.	०५०	Tem	D.	
Shipped To (Lah)							Method of	Shipment			Bill of Lading/A	Air Bill No.			
Severn Trent Inc	ornorated. Ric	hland	**************	<del></del>	****************	*****************	Govt. Ve				OSCILL P	- DI -		w	
Protocol RCRA								Prio	rity: 45 Days		Offsite Property	'No.			
POSSIBLE SAME  ** ** Contains Ra- releasable per DOE On	dioactive Materia	ai at con	ncentrations	that are r	not regulat	ed for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTION All Labs except WSCF: Batch closure of 14 days. WSCF: Batch all PNNL GW:	all PNNL sample		, G, I, S, and \	al Activity Ex W 07 SAFs into	emption: Yes	No o exceed SDG
Sample No.	Lab ID	*	Date		Time	No/Type	e Container		Sampl	e Analysis				Preserva	ative
B1L6Y4		W	11/17/	6 G	946	1x20-m	L P	Activity Scan				None			
B1L6Y4		W	1		1	1x500-n	nL P	TC99_ETVDSK_L	SC: Tc-99 (1)			HCl to pH	<2		
B1L6Y4		W			7	1x500-r	nL G/P	UTOT_KPA: Uran	ium (1)			HNO3 to p	H <2		
B1L6Y4		W			1	1x4000	mL G/P	GAMMALL_GS: L	ist-1 (9)			HNO3 to p	H <2		
B1L6Y4		W			1	1x1000	·mL P	906.0_H3_LSC: T	ritium (1)	***************************************		None			
B1L6Y4		W	V		<b>7</b>	3x1000	-mL G/P	SRISO_SEP_PRI	ECIP_GPC: Sr-90 (1)			HNO3 to p	)H <2		
									J.	J2N'	7				
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Relinquished B		FA 1	Si	์ พื้อV	172	2006 Date	Time 44	Received By Swith	Sprint Sign 1714	m NOV 17	Date/Time,	1440	s = Soil	Matrix *	= Drum Soli
Relinquished By	- Les High	176				Date	:/Time	Received By			Date/Time	S. S.	SE = Sedimo SO = Solid SI = Sludge V = Water	ent Di. T Wi	= Dnm Liou = Tissue
Relinquished By				_,		Date	/Time	Received By			Date/Time	(	O = Oil	v x	= Vegetation = Other

Date/Time

Disposed By

Date/Time

Date/Time

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Received By

Relinquished By

FINAL SAMPLE DISPOSITION

PNNLUG /	41801	4968			CHAIN	V OF (	CUSTODY/	SAMPLE ANALY	SIS REQUEST		0.0.C.# <b>W0</b> 7	7-011-110
Ja Wa	01-01	1-0	6					,			Page 1	of <u>1</u>
Collector					(	Contact/Re Dot Stew			Telephone No. 509-376-5056	MSIN	FAX	
SAF No. 5. M. F. W07-011					S	Sampling C	)rigin		Purchase Order	Charge Code		
Project Title RCRA, NOVEM	BER 2006						(F-506-1		Ice Chest No.	)40	Temp.	
Shinned To (1 sh) Severn Trent Inc.		hland	2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	·		Method of S Govt. Ve	- • · · · · · · · · · · · · · · · · · ·		Bill of Lading/A			
Protocol RCRA	markan da	<u> </u>	METALOPSE AND PROPERTY OF STREET	ANNAGE CONTRACTOR				ority: 45 Days	Offsite Property	No.		
** ** Contains Rad eleasable per DOE Or				are not regulat	ed for transpor	rtation per 49	CFR but are not	All Labs except WSCF: Batch all F closure of 14 days. WSCF: Batch all PNNL GW samp	•		AFs into one SDG	i, not to exceed SDC
Sample No.	Lab ID	*	Date	Time	No/Type (			Sample Ar	alysis		Pre	eservative
B1L6X0	<u> </u>	W	11/12/6	1102	1x20-mL		Activity Scan			None		
B1L6X0		W	1		1x500-mL	_ G/P	UTOT_KPA: Urai	nium (1)		HNO3 to pH <2		
B1L6X0		W			3x1000-m	nL G/P	TC99_SEP_LSC	: Tc-99 (1)		HCI to pH <2		
B1L6X0		W	4	W	1x1000-m	nL P	906.0_H3_LSC:	Tritium (1)		None		
About All All All All All All All All All Al								553	PK			
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Relinquished DAPATE	Print	7 2006	P Received By	A S-Smith NOV	1 7 2006 Date/Time	Matrix *  S = Soil DS	= Drum Solid
Relinquished By	THE	Date/Time	Received By		Date/Time	SE = Sediment   DI     SO = Solid   T     SL = Sludge   WI     W = Water   L	= Drim Liqui = Tissue = Wine = Liquid
Relinquished By		Date/Time	Received By		Date/Time	O = Oil V A = Air X	= Vegetation = Other
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to custome	r, per lab procedure, used in p	rocess)	Disposed By		Date/Time	

PNNL Jan	(1801) 30506 Due 0,	49		(	CHAIN OF	CUSTODY/	SAMPLE ANALYS	SIS REQUEST	į	.o.c.# <b>W07-011-13</b> 4
*	Due O.	1-01	1-07							Page $\underline{1}$ of $\underline{1}$
ollector De	MIEK				Contact/Re			Telephone No.	MSIN	FAX
AF No.	HALL				Dot Stew Sampling C			509-376-5056 Purchase Order		
W07-011					Hanford					
roiect Title _RCRA, NOVEMI	RER 2006				1 141	NF-M-50	DG - 1	Ice Chest No.	04 <i>0</i>	Temp.
hinned To (Lab)					Method of			Bill of Lading/A	ir Bill No.	
Severn Trent Inco	prnorated. Ric	hland.		***************************************	Govt. Ve			Offsite Property	· No	·····
RCRA						Pric	ority: 45 Days	Olisite Property	, 140.	
eleasable per DOE Ord	der 5400.5 (1990	0/1993)	1		ed for transportation per 49	CFR but are not	All Labs except WSCF: Batch all PN closure of 14 days. WSCF: Batch all PNNL GW sample	s submitted into one SDG, dail		
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Ana	lysis		Preservative
B1L6V5		W	11/17/6	1148	1x20-mL P	Activity Scan			None	
B1L6V5		W			1x500-mL P	TC99_ETVDSK_			HCl to pH <2	
B1L6V5		W			1x500-mL G/P	UTOT_KPA: Urai	nium (1)		HNO3 to pH <2	
B1L6V5		W			1x4000-mL G/P	GAMMALL_GS: I	List-1 (9)		HNO3 to pH <2	
B1L6V5		W	A		1x1000-mL P	906.0_H3_LSC:	Tritium (1)		None	
				<u> </u>						
							JJ2	TP		
		1				<u> </u>				
W										
		1	1	1	1					
					Date/Time/4/4	0.0		Date/Time	1440	

Relinquished By

| Date/Time | Option |

PNNLUC Collector	K 1801 WO 50 Due 01	4968	1-07		CHAIN OF	CUSTODY	/SAMPLE ANAL	YSIS REQUES		C.O.C. #  W07-011-190  Page 1 of 1
Collector DAR	GEK WM I				Contact/R			Telephone No.	MSI	
SAF No.	r or value				Dot Ster Sampling			509-376-505	r/Charge Code	
W07-011 Project Title		·			Hanford	Site		1		
RCRA, NOVEM	ABER 2006				<u> </u>	1F-H-50	١ - ١	Ice Chest No.	040	Temp.
Shinned To (Lab) Severn Trent Inc	cornanted Die	h1		***************************************		Shipment		Bill of Lading		
Protocol	THE PRINCIP OF	шиш		***************************************	Goyt. V			Offsite Propert	- No	
RCRA POSSIBLE SAME	DI E HAZADI	SC/DX	NA A DAG	·		Pr	lority: 45 Days		V NO.	
** ** Contains Rai releasable per DOE On	dioactive Materia	il at co	ncentrations tha	t are not regul:	ated for transportation per 4	9 CFR but are not	closure of 14 days.	i Hold Time Il PNNL samples submitted under  aples submitted into one SDG, dai	A, G, I, S, and W 07	tivity Exemption: Yes Y No SAFs into one SDG, not to exceed SDG
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample A	Analysis		Preservative
B1L715		W	1117/6	1300	1x20-mL P	Activity Scan	, , , , , , , , , , , , , , , , , , ,		None	Treservative
B1L715		W		1	1x500-mL G/P	UTOT_KPA: Ura	inium (1)		HNO3 to pH <2	>
B1 <b>L71</b> 5		W			3x1000-mL G/P	TC99_SEP_LSC	: Tc-99 (1)		HCl to pH <2	
B1L715		W	*	W	1x1000-mL P	906.0_H3_LSC:	Tritium (1)		None	
							ファ	ZTT		
	<u> </u>	<u> </u>								· · · · · · · · · · · · · · · · · · ·
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								41		
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					1.1.1	0 0			1	
Relinquished BX F. M. HALL	Print		Sign	NOV 1	7 2006	Received By	L S-Smith Sign	VOV 17 2006 Date/Time	1440	Matrix *  Soil DS = Drum Solid
Relinquished By	- /				Date/Time	Received By		Date/Time	SE = SO = SL =	Sediment DI, = Drim Lioni Solid T = Tissue Sludge WI = Wine
Relinquished By					Date/Time	Received By	The state of the s	Date/Time	n =	Water I. = Liquid Oil V = Vegetation Air X = Other

FINAL SAMPLE DISPOSITION

Relinquished By

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

Received By

Disposed By

Date/Time

Date/Time



#### Sample Check-in List

Date/Ti	ime Received: //	-17-06 14:40	)			
Client:	POW	SDG #: <i>WOS</i>	1068 NA[]	saf#:_ <i>W</i>	07-011 NA[]	
Work (	Order Number 16	K180149	Chain of Custod	y# W07-	011-126,94,220,	110 134,190
Shippir	ig Container ID:		Air Bill #			
I.	Custody Seals on	shipping container intac	et?	NA[]	Yes [ ] No [ ]	
2.	Custody Seals da	ted and signed?		NA[]	Yes [ No [ ]	
3.	Chain of Custody	record present?		"	Yes [/ No [ ]	
4.	Cooler températu	re:NA [/]	5.Vermiculite/packi	ng materials	is NA [/ Wet [] Dry []	
6.	Number of sampl	les in shipping container	:	g/114P		
7.	Sample holding t	imes exceeded?		NA []	Yes[] No[]	
8.	Samples have:tapecustody sea	als .		ázard labels ppropriate sa	amples labels	
9.	Samples are:in good co	ndition		ave air bubb	iles equiring head space)	-
10.	Sample pH taken	? NA[] pH	H<2[] pH>2[]	pH>9[]		
11.		, Sample Collector Listerion only. No corrective			Yes [/ No []	
12.	Were any anoma	lies identified in sample	receipt?		Yes [] No [/]	
13.	Description of an	omalies (include sample	numbers):			
		1				
Sample	: Custodian:	Smith	Date:	11-17	-06 14:40	
Cli	ent Sample ID	Analysis Requested	Conditi	on	Comments/Action	
Client I	nformed on	by	Person o	ontacted		and.
	action necessary; pr					
Project	Manager		Date			
LS-023	, 9/03, Rev. 5					

1/2 /	VIACIO	64	´									C.O.C.#		
PNNLJ61	W050	68	>			CHA	N OF	CUSTODY/	SAMPLE ANALY	SIS REQUEST	Γ		W07-011-2	278
I du	e 01-01	-04										Pa	ge <u>1</u> of <u>1</u>	
Collector	Fluor Hamon	Ċ.					Contact/Re			Telephone No.	MS	IN	FAX	
SAF No. W07-011	J. G. HOGA	4					Dot Stew Sampling C			509-376-5056 Purchase Order				
1					·····		Hanford				/Charge Code			
Project Title RCRA, NOVEM	(BER 2006						HU	F.N-50	6-3	Ice Chest No.	RP-06-06	Temp.		***************************************
Shinned To (Lab)							Method of			Bill of Lading/A	ir Bill No.	<u> </u>	<del></del>	
Severn Trent Inc	comorated. Ric	hland		CONTRACTOR OF THE PARTY OF THE		***************************************	Govt. Ve	hicle		Offsite Property	NT-			
RCRA								Pric	rity: 45 Days	Offsite Property	v 190.			
POSSIBLE SAMI  ** ** Contains Ra releasable per DOE O	dioactive Materia	al at con	ncentratio	CS ons that :	are not regulat	ed for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all P1 closure of 14 days. WSCF: Batch all PNNL GW sample		A, G, I, S, and W 07		mption: Yes 🗹 one SDG, not to excee	
Sample No.	Lab ID	*	Da	ıte	Time	No/Typ	Container		Sample Ana	alysis			Preservative	
B1L799		W	11-1	7-06	1302	1x20-m	L P	Activity Scan			None	· · · · · · · · · · · · · · · · · · ·		
B1L799		W			ı	1x500-r	nL P	TC99_ETVDSK_L	SC: Tc-99 (1)		HCl to pH <2			<del> </del>
B1L799		W				1x1000	mL P	906.0_H3_LSC: T			None			
B1L799		W	V		Ÿ	1x1000	mL P	9310_ALPHABET	A_GPC: Alpha + Beta (2)	***************************************	HNO3 to pH <	:2		
						·								
										TJ2VB				
			<u> </u>											
			<u> </u>											
			<u> </u>											
		·	_1_				1111 6	5-17			1445			
	Printuor Hanford G. HOGAN	+	) [].	Sign	_ NOV	1 7 2	<sub>/Time</sub> /44 106	Received By /	1 Sm 1774	NOV 1Date/Tiggs	- 1	= Soil	Matrix *	Samue 6 - 15 4
Relinquished By		<del>] {</del>	No				/Time	Received By	- Andrews - Andr	Date/Time	SE SO	= Soli = Sediment = Solid = Sludge	DI. = D	Imm Liani Tissue
Relinquished By					A 2000 M	Date	/Time	Received By		Date/Time	w	= Water = Oil = Air	1. = 1:	iauid Zegetation
Relinquished By					····	Date	/Time	Received By		Date/Time		·····		
FINAL SAMPI		Metho	d (e.g., R	eturn to	custorner, per	lah procedu	re, used in proc	l cess)	Disposed By	And the same		Da	ate/Time	
DISPOSITION								······································	The state of the s					

1/2	K1801	64										C.O.C	#
PNNL JG	W0506	8			•	CHAI	NOF	CUSTODY/	SAMPLE ANALY	SIS REQ	UEST		W07-011-396
J J	Lue 01	1-01	-07										Page <u>1</u> of <u>1</u>
Confector F	luor Harriord				-		Contact/Re				hone No.	MSIN	FAX
\$AF No. - W07-011	.G. HOGAN	····					Dot Stew Sampling (		,		9-376-5056 hase Order	Charge Code	
							Hanford	Site					
Project Title RCRA, NOVEM	IBER 2006						Hr	# · N-50	76.3	Ice Cl	hest No. 💪	2P-06-002 Ten	3p.
Shinned To (Lab)					**********		Method of			Bill of	f Lading/A	ir Bill No.	
LSevern Trent Inc Protocol	comorated, Ric	hland.	A COLUMN TO SERVICE STATE OF THE SERVICE STATE STATE OF THE SERVICE STATE OF THE SERVICE STATE STATE STATE STATE STATE STATE STATE STAT		THE RESIDENCE OF THE PARTY OF T	***************	Goyt, Ve			Officit	te Property	No	
RCRA							<u> </u>	Pric	ority: 45 Days	Ottsit	ic 1 toperty		
POSSIBLE SAME  ** ** Contains Rai releasable per DOE Of	dioactive Materia	l at cor	centratio		are not regulate	d for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all P closure of 14 days. WSCF: Batch all PNNL GW sample		nitted under A	, G, I, S, and W 07 SAFs in	xemption: Yes V No Lato one SDG, not to exceed SDG
Sample No.	Lab ID	*	Da	te	Time	No/Type	Container		Sample An	nalysis		***************************************	Preservative
B1L623		W	11-17	200	1200	1x20-ml	- P	Activity Scan				None	
B1L623		W	1		r	1x500-n	IL P	TC99_ETVDSK_L	.SC: Tc-99 (1)		. , , , , , , , , , , , , , , , , , , ,	HCI to pH <2	
B1L623		W				1x4000-	mL G/P	GAMMALL_GS: L	ist-1 (9)			HNO3 to pH <2	
B1L623		W				1x1000-	mL P	906.0_H3_LSC: T	ritium (1)			None	
B1L623		W	J		V	1x1000-	mL P	9310_ALPHABET	A_GPC: Alpha + Beta (2)		· · · · · · · · · · · · · · · · · · ·	HNO3 to pH <2	
									<i>J</i>	T2VN			
		$\vdash$	<del> </del>										
314		+	<del>                                     </del>										
		†	<del> </del>								***************************************		
		$\vdash$	<del> </del>					<b>—</b>					
		T	<del> </del>				****		**************************************				
		.l	1					<u>.</u>				L	
Relinquished By	or Hanfordia	17	Ho	Sign	NI	Date.	7 2005	Received By	Serint Sign	NUA	Date/Time	15 s = soil	Matrix *
Relinquished By		) /	17			Date	Time	Received By			Date/Time	SF = Sedim SO = Solid SI = Sludge W = Water	T = Tissue e WI = Wine
Relinquished By			•			Date	Time	Received By			Date/Time	O = Oil A = Air	I, = Liquid V ≈ Vegetation X = Other
Relinquished By			***************************************		***************************************	Date	Time	Received By			Date/Time		
FINAL SAMPL DISPOSITION		Method	l (e.g., Re	eturn to	customer, per l	ab procedu	re, used in proc	eess)	Disposed By	-M. January			Date/Time
L DISPOSITION					The state of the s								White the second

PNNL January Collector F SAF No. W07-011 Project Title	418010 [U0570 201-0	1-0	7			CHA			SAMPLE ANALYS	IS REQUES	Γ	C.O.C.#	<b>V07-011-</b>	
Conector	G. HOGAN						Contact/R			Telephone No.	MSI	<u> </u>	FAX	
SAF No.			***************************************				Dot Ster Sampling			509-376-5050 Purchase Orde	6			
Project Title	·						Hanford	Site		rurchase Orde	r/Charge Code			I
<u> </u>	BER 2006						HN	F-N-50	6.3	Ice Chest No.	C-R D.06-00	7 Temp.		
Shinned To (Lab) Severn Trent Inc.	1 22		*********				Method of	Shipment		Bill of Lading/		1 4		
Protocol	omorated, Ric	hland	*******			*	Govt. V	ehicle						1
RCRA						····		Prie	ority: 45 Days	Offsite Propert	y No.	<u>-</u>		
POSSIBLE SAMP  ** ** Contains Rad releasable per DOE On	ioactive Materia	l at cor	centratio	S ons that	are not regu	ulated for transp	ortation per 4	9 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNNI closure of 14 days. WSCF: Batch all PNNL GW samples so		A, G, I, S, and W 07 S	ivity Exerm SAFs into one	otion: Yes 🗹 SDG, not to excee	No Led SDG
Sample No.	Lab ID	*	Da	te	Time	No/Type	Container		Sample Analys	ris			Dungamatin	
B1L619		W	K-17	-8C	1105	1x20-mL	Р	Activity Scan			None		Preservative	<u>i</u>
B1L619		W		1	,	1x500-π	L P	TC99_ETVDSK_L	SC: Tc-99 (1)		HCI to pH <2	·		
B1L619		W				1x4000-	nL G/P	GAMMALL_GS: L			HNO3 to pH <2			
B1L619		W				1x1000-i	nL P	906.0_H3_LSC: T			None			
B1L619		W				3x1000-i	nL G/P	1	ECIP_GPC: Sr-90 (1)					
B1L619		W				1x1000-i	nL P		A_GPC: Alpha + Beta (2)		HNO3 to pH <2			
B1L619		W	1			2x4000-r	nL G/P		SEP_GS: I-129_ETVDSK (1)		HNO3 to pH <2		·	
B1L619		W	V		1	1x1000-r	nL G/P	Ni63_LSC: Nickel			None		· · · · · · · · · · · · · · · · · · ·	
V									750	2V/	HNO3 to pH <2			
			7											
	Print Hanford HOGAN	<u> </u>	Ho	ign	N	Date/I	<u>/4</u> 4 S 2006	Received By I mid	L Sign N	OV 1 7 2006	/ <del>44</del> }	M	atrix *	
Relinquished By		/ ,				Date/I		Received By	o omily	Date/Time	SF. = SO =	Soil Sediment Solid Sludge	DS = Dn DI = Dn T = Tis WI = Wi	om Liani ssue
Relinquished By						Date/I	·	Received By		Date/Time	W =	Water Oil Air	T. = T.io	mid egetation
Kemquished By						Date/T	ime	Received By		Date/Time				
FINAL SAMPLE DISPOSITION	Disposal M	ethod (	e.g., Ret	um to c	ustomer, pe	r lab procedure,	used in proce	ess)	Disposed By			Date/I	ime	

PNNL ULK 180164 W05068
Due 01-01-07

C.O.C.#

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST W07-011-408 <u>1</u> of <u>1</u> Fluor Hanford Collector Contact/Requester Telephone No. J. G. HOGAN **MSIN** FAX Dot Stewart 509-376-5056 SAF No. Sampling Origin Purchase Order/Charge Code \_W07-011 Hanford Site Project Title Ice Chest No. GRP 06-002 HNF - N-50C+3 RCRA, NOVEMBER 2006 Shinned To (Lab) Method of Shipment Bill of Lading/Air Bill No. Severn Trent Incorporated, Richland Govt. Vehicle Protocol Offsite Property No. Priority: 45 Days RCRA POSSIBLE SAMPLE HAZARDS/REMARKS SPECIAL INSTRUCTIONS **Hold Time** \*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not Total Activity Exemption: Yes V No All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG releasable per DOE Order 5400.5 (1990/1993) closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure. Sample No. Lab ID Date Time No/Type Container Sample Analysis Preservative B1L634 0935 11-17-06 1x20-mL P Activity Scan None B1L634 W 1x500-mL P TC99\_ETVDSK\_LSC: Tc-99 (1) HCl to pH <2 B1L634 W 1x1000-mL P 906.0 H3 LSC: Tritium (1) None B1L634 W 2x4000-mL G/P 1129LL\_SEP\_LEPS\_GS\_LL: I-129 (1) None TJUH Date/Time /44 Relinquished By Sign Received By Matrix \* Fluor Hanford J. G. HOGAN NOV 1 7 2006 = Soil DS = Drum Solid Relinquished By Date/Time Received By = Sediment Date/Time DI. = Drim Lioni SO = Solid = Tissue SI. = Sludge = Wine Relinquished By = Water = Lianid Date/Time Received By Date/Time  $\mathbf{o}$ = Oil = Vegetation Relinquished By Received By Date/Time Date/Time FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time DISPOSITION

PNNL JOI	418016 40506 4061-0	8	77		CHAIN OI	F CUSTODY/	SAMPLE ANAL	YSIS REQUES	Г	C.o.c.# <b>W07</b> -	-011-4	103
Collector	Fluor H	lanfor	<u>/ /                                    </u>		Contact	/Requester		1			of <u>1</u>	
<u> </u>	.1 G.H	OGAL	<u> </u>			tewart		Telephone No. 509-376-505	MSIN	FAX		٦
SAF No. W07-011						g Origin		Purchase Orde				
Project Title	***************************************				Hanto	ord Site	443					
RCRA, NOVEM	BER 2006		······································			1-1NF-N-	506 3	Ice Chest No.	ANC 109	Temp.		
Shinned To (1 sh) Severn Trent Inc	ornarated Dia	hlond	·-···	····		of Shipment		Bill of Lading/	Air Bill No			
Protocol	JUNIAICU, NII.	THE STATE	**********	<del></del>	Govt	Vehicle						
RCRA				····		Prio	ority: 45 Days	Offsite Propert	v No.			
POSSIBLE SAMP  ** ** Contains Rac releasable per DOE Or	ioactive Materia	l at cor	centrations that	t are not regul	ated for transportation per	r 49 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all closure of 14 days. WSCF: Batch all PNNL GW sam	I PNNL samples submitted under	A, G, I, S, and W 07 S	vity Exemption: NAFs into one SDG, n	Yes Not to exceed	SDG
Sample No.	Lab ID	*	Date	Time	No/Type Containe	r l	Sample A	Analysis				
B1L627		W	11-17-06	0700	1x20-mL P	Activity Scan	Sample A	unary515	<b>L</b> .	Prese	rvative	
B1L627		W	1	1 7	1x500-mL P	TC99_ETVDSK_L	CC: To 00 (4)		None			
B1L627	<u> </u>	W		<del>                                     </del>	1x4000-mL G/P				HCl to pH <2			
B1L627		W		<del>                                     </del>		GAMMALL_GS: L			HNO3 to pH <2		· · · · · · · · · · · · · · · · · · ·	
B1L627				+-	1x1000-mL P	906.0_H3_LSC: Ti			None		*	
B1L627		W		<del>                                     </del>	1x1000-mL P		A_GPC: Alpha + Beta (2)		HNO3 to pH <2		-	
B ILO21		W	<u> </u>	1	2x4000-mL G/P	I129LL_SEP_LEP	S_GS_LL: I-129 (1)		None		***************************************	
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Relinquished By Fluor Harriord J. G. HOGAN	1-71	to	Sign	_ NO:	Date/Time 14 V 1 7 2006	Received By mith	Print Sign	NOV 1 7 2005 "	1445	Matrix *		· · · · · · · · · · · · · · · · · · ·
Relinquished By	7	(	2		Date/Time	Received By	_ C ON ITT	Date/Time	S = 5 SE = 5 SO = 5	Sediment DI Solid T		n Liaui se
Relinquished By					Date/Time	Received By			W ≈ '	Water 1.	= Liqui	id
					A LEE MU	Table 14th By		Date/Time	O = (		= Vege	etation
Relinquished By					Date/Γime	Received By		Th				
								Date/Time				
FINAL SAMPLE DISPOSITION	Disposal M	[ethod (	e.g., Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By			Date/Time		

PNNL U6K180164 W05768 CHA					CHAIN	IN OF CUSTODY/SAMPLE ANALYSIS REQUEST					L C.C	W07-011-402	
Collector	Fluor Har				Con	ntact/Rea	uester					Page 1 of 1	
SAF No.	3, G. HO		<del></del>			Dot Stewar	rt			Telephone No. 509-376-5056	MSIN	FAX	
W07-011						npling Or Hanford Si			]	Purchase Order	<del></del>		
Project Title							a site						
RCRA, NOVEM						HN.				ce Chest No.	Su w 109 1	emp.	
Severn Trent Inc		hland	1				f Shipment Bill of Lading			Bill of Lading/A			
Protocol	Michigan Company Compa	) del mariante		MARKET PROPERTY OF THE PARTY OF		Goyt, Vehi	emere						
POSSIBLE SAMI							Priority: 45 Days Offsite Property			Offsite Property	v No.		
** ** Contains Rai releasable per DOE On	dioactive Materiz rder 5400.5 (1999	al at co: 0/1993	ncentrations that	t are not regula	ted for transportation	on per 49 C	FR but are not	SPECIAL INSTRUCTION All Labs except WSCF: Bate closure of 14 days. WSCF: Batch all PNNL GW	tch all PNNL samples	submitted under A	, G, I, S, and W 07 SAFs	Exemption: Yes No into one SDG, not to exceed SDG	
Sample No.	Lab ID	*	Date	Time	No/Type Con	tainer		Sample Analysis					
B1L626	<u></u>	W	11-17-06	0831	1x20-mL P		Activity Scan			I	Preservative		
B1L626		W	1	11	1x500-mL P		TC99_ETVDSK_LSC: Tc-99 (1)				None		
B1L626	1	W		<del>                                     </del>	1x4000-mL		GAMMALL_GS: List-1 (9)				HCl to pH <2		
B1L626	1	W	+	+	1x1000-mL		906.0_H3_LSC: Tritium (1)				HNO3 to pH <2		
B1L626	<del> </del>	w	++	<del>                                     </del>	1x1000-mL						None	79	
B1L626	<del> </del>	W	1.6-	<del>                                     </del>			9310_ALPHABETA_GPC: Alpha + Beta (2)				HNO3 to pH <2		
	<del> </del>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	14		2x4000-mL (	G/P I	I129LL_SEP_LEPS_GS_LL: I-129 (1)				None		
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Relinquished By						144)							
Fluor Harriord Sign Date/Time						/ / Re	Received By / Print Sign Date/Time			<del>/                                    </del>	Matrix *		
J. G. HOGAN / NOV 1				QV 1720						R I			
Relinquished By		1	1		Date/Time		xeived By		110	Date/Time	S = Soil SE = Sedi SO = Solic SL = Slad	ment DI = Drum Liqui † T = Tissue	
Relinquished By Date/Time							ceived By			Date/Time	W = Wat O = Oil A = Air		
Relinquished By Date/Time						Re	ceived By			Data/Time			

Date/Time

Date/Time

Disposed By

FINAL SAMPLE DISPOSITION 1105

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

PNNLUG.	K 180.	165 168	7		CHAIN C	OF CUSTODY/	SAMPLE ANALYSIS	S REOUEST	C.O.C	* W07-011-384		
1 0	01-01-		7					o respective				
Collector Fluor Ha	niord			······································		Contact/Requester				Page 1 of 1		
SAF No.	GAN					t Stewart	The second secon	509-376-5056	Telephone No. MSIN FAX 509-376-5056			
W07-011			·····			olling Origin nford Site		Purchase Order/	Purchase Order/Charge Code			
Project Title RCRA_NOVEN	IBER 2006				M	NF-N-506		Ice Chest No.	Ice Chest No. CDP 06-00 2 Temp.			
Shinned To (Lab)						od of Shipment			Bill of Lading/Air Bill No.			
Severn Trent Inc	corporated, Ric	hland			Gov	vt. Vehicle						
RCRA						Pric	Offsite Property No.					
POSSIBLE SAMI  ** ** Contains Ra releasable per DOE O	dioactive Materia	at con	centrations that	t are not regula	ited for transportation	per 49 CFR but are not	SPECIAL INSTRUCTIONS  All Labs except WSCF: Batch all PNNL siclosure of 14 days.  WSCF: Batch all PNNL GW samples subr		G, I, S, and W 07 SAFs int	temption: Yes V No o one SDG, not to exceed SDG		
Sample No.	Lab ID	*	Date	Time	No/Type Contai	iner	Sample Analysis	to the total of th	3,000,000,000,000,000,000,000,000,000,0			
B1L615		W	11-17-06	1014	1x20-mL P	Activity Scan	Sample Analysis		Nt	Preservative		
B1L615		W	1	1	1x500-mL P	TC99_ETVDSK_L	SC: Tc-99 (1)	None				
B1L615		W			1x4000-mL G/		CAMBIALL COLLEGE					
B1L615		W			1x1000-mL P		006.0 H2 150. Taking (4)					
B1L615		W	1		3x1000-mL G/		CDICO CED DECIS COS COS COS COS COS COS COS COS COS CO					
B1L615		W		1	1x1000-mL P		00/0 11 01/10					
B1L615	1	W		<del>                                     </del>	2x4000-mL G/		9310_ALPHABE I A _ GPC: Alpha + Beta (2)					
B1L615		W	<u> </u>	1	1x1000-mL G/			NO3 to pH <2	nH <2			
					<u> </u>				11100 to pri 12			
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							A CONTRACTOR OF THE CONTRACTOR					
Relinquished H.G. H	anford Print	7 +	Sign		Date/Time 17	194 Received By	Print Sign	NOV 1 7 20	93	Matrix *		
Relinquished By		1			Date/Time	Received By		Date/Time	SE = Sedimer SO = Solid SL = Sludge	T = Tissue WI = Wine		
Relinquished By					Date/Time	Received By		Date/Time	W = Water O = Oil A = Air	$\begin{array}{rcl} I. & = & Liquid \\ V & = & Vegetation \\ X & = & Other \end{array}$		
Relinquished By					Date/Time	Received By		Date/Time		A CONTRACTOR OF THE CONTRACTOR		
FINAL SAMPLE DISPOSITION		1ethod (	e.g., Return to	customer, per	lab procedure, used in	n process)	Disposed By	The state of the s	E	ate/Time		

# SEWERN STL

#### Sample Check-in List

Date/Tir	me Received: 11-17-06 1445	<b>-</b>					
<b>~</b> 1:	PMI) SDG # /1/A	5168	ΝΑ[] SAF#: <i>WC</i>	07-01/ N.	A[]		
Work O	rder Number: <u>U&amp;K 1801L</u> 4	Chain o	f Custody # <u>W07-</u>	011-278,3	96,390 408,463,		
Shippin	g Container ID:	Air Bill	#	***	700,001,		
1.	Custody Seals on shipping container inta						
2.	Custody Seals dated and signed?		NA[] Yes[// No[]				
3.	Chain of Custody record present?		Yes [ No[]				
4.	Cooler température: NA 🖊	5.Vermicul	ite/packing materials	is NA [ * Wet [	] Dry [ ]		
6.	Number of samples in shipping containe	r:					
7.	Sample holding times exceeded?			Yes[] No[]			
8.	Samples have:tapecustody seals		hazard labels	amples labels			
9.	Samples are:in good conditionbroken		leakinghave air bubb (Only for samples r		nace)		
10.	Sample pH taken? NA[] F	)H<2/7 F	M>2[/] pH>9[]				
11.	Sample Location, Sample Collector List *For documentation only. No corrective	ted? * e action need	led.	Yes [/] No[]			
12.	Were any anomalies identified in sampl	e receipt?		Yes[] No[/			
13.	Description of anomalies (include samp	le numbers):					
<u> </u>	0				ikkermakera fina pina pengenga papira baharing		
Sample	Custodian: S. Smith		Date: 11-17	-06	1445		
	ient Sample ID Analysis Requested	1	Condition	Comments/	Action		
Client J	Informed onby		Person contacted	1			
[ ] No	o action necessary; process as is.						
Project	Manager		Date		·		
LS-023	3, 9/03, Rev. 5		/				

107

PNNLU6/	(2102 2050 Due 0	19	4-07		CHAIN OF	CUSTODY	/SAMPLE ANALYSIS	REQUEST	Γ	C.O.C. # <b>I07-011-108</b>			
Collecto Fluor Han R. T. SICK					Contact/R		-	Telephone No.	MSI	Page <u>l</u> of <u>l</u> N FAX			
SAF No.					Dot Stev Sampling			509-376-5056		FAX			
I07-011 Project Title					Hanford			1	Purchase Order/Charge Code				
ISRM-LOL NOV	EMBER 2006	5			1 44	1F-N-506	-7	Ice Chest No. 17	2055	Temp.			
Shinned To (Lab)					Method of	Shipment		Rill of Lading/A	ling/Air Bill No.				
Severn Trent Inco Protocol	rporated, Ric	hland	***************************************	——————————————————————————————————————	Govt. V	ehicle							
CERCIA	PILLER					Pri	ority: 45 Days	Offsite Property No.					
POSSIBLE SAMPI ** ** Contains Radi releasable per DOE Ord	oactive Materia	l at cor	centrations that	are not regulat	ed for transportation per 4!	9 CFR but are not	SPECIAL INSTRUCTIONS Ho All Labs except WSCF: Batch all PNNL sam closure of 14 days. WSCF: Batch all PNNL GW samples submit		., G, I, S, and W 07	ivity Exemption: Yes V No SAFs into one SDG, not to exceed SDG			
Sample No.	Lab ID	*	Date	Time	No/Type Container		C1- A 1 :						
B1L2W4		W	11/20/5	1029	1x20-mL P	Activity Scan	Sample Analysis			Preservative			
B1L2W4		w	\(\frac{1}{2}\alpha\)	4	1x500-mL G/P	UTOT_KPA: Ura	alum (1)		None				
				<b>Y</b>	12000-IIIL 0/I	OTOT_RPA. Ura	nium (1)		HNO3 to pH <2				
	<del></del>	<del>                                     </del>					JJ6KT						
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Relinquished By Fluor Hanfor R. T. SICKLE	d Print			NOV 2 (	Date/Time 1500 2006	Receiped By .	Sign NOV	2 0 2006		Matrix *			
Relinquished By		_		-	Date/Time <	Received By		Date/Time	SO = SL =	Sediment DI = Drum Liqui Solid T = Tissue Sludge WI = Wine			
Relinquished By					Date/Time	Received By		Date/Time	W =	Water         I.         = Liquid           Oil         V         = Vegetation           Air         X         = Other			
Relinquished By					Date/Time	Received By		Date/Time					
FINAL SAMPLE DISPOSITION	Disposal M	fethod	(e.g., Return to e	customer, per l	ab procedure, used in proce	ess)	Disposed By			Date/Time			

PNNL L	K210. U0504 U1-04	219 68 1-0	7		CHAIN OF			07-011-	74			
Collector Fluor H	anford					Requester		Telephone No.	MSIN			
SAF No. R. T. SK			***		Dot Ste Sampling			509-376-5056				
107-011					Hanfor			Purchase Order/Ch				
Project Title ISBM-LOL NOV	EMBER 2006	<b>S</b>			HN	F-N-506		Ice Chest No. 120	SS	Temp.		_
Shinned To (Lah)						f Shipment	***************************************	Bill of Lading/Air I				
Severn Trent Inco	morated, Ric	hland.	*****		Govt. V	/ehicle					· · · · · · · · · · · · · · · · · · ·	
CERCLA					· ·	Pri	ority: 45 Days	Offsite Property No.				
POSSIBLE SAMPI  ** ** Contains Radi releasable per DOE Ord	ioactive Materia	l at cor	ocentrations that	are not regula	ted for transportation per	49 CFR but are not	SPECIAL INSTRUCTIONS Ho All Labs except WSCF: Batch all PNNL sam closure of 14 days. WSCF: Batch all PNNL GW samples submit		I, S, and W 07 S	ivity Exemption SAFs into one SDA	: Yes V N G, not to exceed	o U SDG
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Analysis		· · · · · · · · · · · · · · · · · · ·		eservative	
B1L2R8		W	11/20/4	CAUZ	1x20-mL P	Activity Scan	Cample Palarysis	No	ne		eservative	<u></u>
B1L2R8		W	4	V	1x500-mL G/P	UTOT_KPA: Urar	nium (1)		1O3 to pH <2			
								1 11	103 to pi 1 \z	**************************************		
							JJ6K2					
							00610					
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Relinquished By Fluor H R. T. Sk		1/2		NOV 2	0 2006 15t	Received By	Sign NOV 7	Date/Time / S	1	Matri		
Relinquished By			<b>\</b>	48	Date/Time	Received By		Date/Time	SE = SO = SL =	Soil Sediment Solid Shidge Water	DS = Dnn D1. = Dnn T = Tiss WI = Win	m Liaui ne ne
Relinquished By	1,000				Date/Time	Received By		Date/Time	O =	Oil Air	<ul> <li>T. = Liou</li> <li>V = Veg</li> <li>X = Other</li> </ul>	etation
Relinquished By					Date/Time	Received By		Date/Time				
FINAL SAMPLE DISPOSITION	Disposal N	Aethod	(e.g., Return to	customer, per	lab procedure, used in pro	ocess)	Disposed By			Date/Time		

1	PNNL 105768
	PNNL WOSD68
İ	Due 01-04-07

C.O.C.#

	01-04-	07	7		CHAI	NOF	CUSTODY	/SAMPLE A	NALYSIS F	REQUEST	• •			11-82	
Collector Fluor H	anford		<del></del> ,		-	Contact/R				Telephone No.	MS	Page	FAX	1	
SAF No. R. T. SI	CKLE					Dot Stev Sampling				509-376-5056					
107-011 Project Title			·			Hanford	Site			Purchase Order					
ISRM-LOL NO		6				14	NF - 506	-N-Z		Ice Chest No.	२०ऽऽ	Temp.	· · · · · · · · · · · · · · · · · · ·		
Shinned To (Lab) Severn Trent Inc		hlond				Method of		Bill of Lading/Air Bill No.							
Protocol	ANTARAL AR	mann	*		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Govt. Ve					operty No.				
CERCLA POSSIBLE SAMI	PIFUATADI	10/DE	MADEC				Pri	ority: 45 Days		Offsite Property	No.				
** ** Contains Ra releasable per DOE O	dioactive Materia	al at co	ncentrations that	t are not regula	ted for transpo	ortation per 49	OCFR but are not	1 Closure of 14 days.	CTIONS Hold  Batch all PNNL sample  L GW samples submitted		, G, I, S, and W 07	tivity Exemp SAFs into one	otion: Yes	No Lexceed SDG	
Sample No.	Lab ID	*	Date	Time	No/Type	Container			Sample Analysis	***************************************			Preservativ	/e	
B1L2T4		·	11/20/1								None			1	
B1L2T4		W	4	4	1x500-m	L G/P	UTOT_KPA: Urai	nium (1)			HNO3 to pH <	ctivity Exemption: Yes V No L 7 SAFs into one SDG, not to exceed SDG  Preservative			
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Relinqui Flux Flam R. T. SICK	Print		Sign	HW 200	THE S	ime 1500	Received By	Print	Sign NOV 2 0	Date/Time /	1570	M	latrix *		
Relinquished By	110				Date/I	ime	Received By	ith S-om,	1774 NOV 2 N	Date/Time	SE = SO =	Soil Sediment Solid	DI. =	Drum Solid Drum Liqui Tissue	
Relinquished By		***********		·	Date/I	ime	Received By			Date/Time	W =	Sludee Water Oil	WI == I. == V ==	Wine Liquid Vegetation	
Relinquished By				······································	Date/T	ima	Received D					Air	X =	Other	
•					Date/1	HIK.	Received By			Date/Time			- <del></del> -	-	
FINAL SAMPLE DISPOSITION		lethod	(e.g., Return to	customer, per	lab procedure,	used in proce	i ess)	Disp	osed By	Withhilds		Date/I	ime		
I															

# SIAMEN STL

# Sample Check-in List

Date/Ti	me Received: //	20-06 1500							
Client:_	Pow	SDG #: <i>W05</i>	068 NA	[] SAF#: <u>4</u>	07-011 NA[]				
Work C	order Number: <u>U</u>	6K210219	Chain of C	ustody # <u>WO</u>	7-011-24, 108, 74, 82				
Shippin	g Container ID:			***					
1.	Custody Seals on	shipping container intact	?	NA []	Yes [ No [ ]				
2.	Custody Seals da	ted and signed?	NA[] Yes [ No[]						
3.	Chain of Custody	record present?	Yes X No[]						
4.	Cooler temperatu	re:NA[/] 5.	.Vermiculite/j	packing materia	ls is NA() Wet[]Dry[]				
6.		es in shipping container:_	×3						
7.	Sample holding t	imes exceeded?	R	NA N	Yes[] No[]				
8.	Samples have:tapecustody sea	uls .	No.	hazard label appropriate	is				
9.	Samples are:in good corbroken	ndition	(0	leaking have air but nly for samples	obles requiring head space)				
10.	Sample pH taken	? NA[] pH<	2() pH>	2[] pH>9[]					
11.		Sample Collector Listed? on only. No corrective ac			Yes [] No []				
12.	Were any anomal	ies identified in sample re	eceipt?		Yes[] No X				
13.	Description of an	omalies (include sample n	numbers):						
Sample	Custodian:	Smith	Date	11.20	06 1500				
	ent Sample ID	Analysis Requested	Co	ondition	Comments/Action				
Client In	formed on	by	Per	son contacted					
[ ] No	action necessary; pro	ocess as is.			•				
Project N	Manager		Da	te					
LS-023.	9/03, Rev. 5								

PNNLUGK210263 C.O.C.# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST S07-011-64 Due 01-04-07 of 1 Contact/Requester E.M. HALL Telephone No. MSIN FAX Dot Stewart SAF No. 509-376-5056 Sampling Origin S07-011 Purchase Order/Charge Code \_Hanford Site Project Title Ice Chest No. SURV. NOVEMBER 2006 HNF-N.506 4 Temp. Shinned To (Lah) Method of Shipment Bill of Lading/Air Bill No. Severa Trent Incorporated, Richland Goyt, Vehicle Protocol SURV Offsite Property No. Priority: 45 Days POSSIBLE SAMPLE HAZARDS/REMARKS \*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes V No All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG releasable per DOE Order 5400.5 (1990/1993) closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure. Sample No. Lab ID Date Time No/Type Container Sample Analysis B1L3X4 Preservative W 1103 11-70-06 1x1000-mL P 906.0\_H3\_LSC: Tritium (1) None B1L3X4 W 1x20-mL P Activity Scan None JJ620 11-20-06 Relinitatori Hanford Received By F. M. HÁLL 2972806 Matrix \* Relinquished By = Soil = Dnm Solid Date/Time Received By SE Date/Time = Sediment DI. = Drum Liqui SO ≈ Solid = Tissue = Sludge WI = Wine Relinquished By w = Water Date/Time = Lionid Received By Date/Time  $\mathbf{o}$ = Oil = Vegetation = Air = Other Relinquished By Date/Time Received By Date/Time FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By DISPOSITION Date/Time

PNNL Collector Fluor	(210) WOS Me 01-1	263 706 04.0	3 8 7 7	-			/SAMPLE ANAL	YSIS REQUEST	Γ		507-011-:	58
Collector Fluor F. M. SAF No. S07-011 Project Title	HALL					/Requester tewart		Telephone No.	MSI			$\dashv$
SAF No.						g Origin		509-376-5056 Purchase Order	(Charge Code			
Project Title	***************************************				1	ord Site						1
DURY NO YEN	BER 2006				HN	1F.N.50	6 4	lce Chest No. らないら	-1/5	Тетр.		$\neg$
Shinned To (Lab) Severn Trent Inco	omorated Ric	hland	***************************************			of Shipment		Bill of Lading/A	ir Bill No.			-
Protocol	*********		***************************************		Govt.	Vehicle						
SURV POSSIBLE SAMP	FHAZARI	S/DE	MADVC			Pri	ority: 45 Days	Offsite Property	No.			
** ** Contains Rad eleasable per DOE Orc	ioactive Materia	l at con	centrations that	are not regular	ed for transportation per	r 49 CFR but are not	i closure of 14 days.	Hold Time I PNNL samples submitted under A mples submitted into one SDG, daily	, G, I, S, and W 07	ctivity Exemption SAFs into one SD	n: Yes V No G, not to exceed S	SDG
Sample No.	Lab ID	*	Date	Time	No/Type Containe	т	Sample A	Analysis				
B1L3X7		W	11-20-06	1149	1x1000-mL P	906.0_H3_LSC:			Mone	Pr	reservative	
B1L3X7		W		-	1x20-mL P	Activity Scan			None			
							The state of the s		None			
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	***************************************											
Relinguished By Fluor Hanford F. M. HALL	Print			4	10V PZ T 2006	Received By  DAVIL HARS	Print Sign	Date/Time (	5! vp	Matri	x *	
Relinquished By			VII		Date/Time	Received By	400	NOV 2 0 20 Date/Time	SE = SO =	Soil Sediment Solid Sludge	DS = Dram DL = Dram T = Tissue WI = Wine	r Liani e
elinquished By Date/Time					Date/Time	Received By	Received By W = Water I. = I					d tation
Relinquished By				acc (#	Date/Time	Received By		Date/Time	I			***************************************
FINAL SAMPLE DISPOSITION	Disposal N	lethod (	e.g., Return to c	ustomer, per l	ab procedure, used in pr	occess)	Disposed By	111 7-1-1111111111111111111111111111111		Date/Time		
						·						

PNNL UG	K210. W0500	76° 68		n TT	CHAIN O	E CUSTODY	/SAMPLE ANALYSIS	S REQUEST	C.O.	C.# S07-011	-70	
	<u>all</u> Nuratek	<u>u (</u>	7-47-6	0/	Contact	/Requester		(T-1-1-N		Page 1 of 1		
	MHALL				Dot S	tewart		Telephone No. 509-376-5056	MSIN FAX			
AF No. S07-011						g Origin ord Site		Purchase Order/Ch	arge Code	<del></del>		
roject Title							_	Inc Chart No.				
SURV. NOVEMI	BER 2006	·			HN	1F-N-500	0 4	Ice Chest No. らみいら。	115 Te	mp.		
Severn Trent Inco	rmorated, Ric	hland	***************************************	**********		of Shipment Vehicle		Bill of Lading/Air B	ill No.	· · · · · · · · · · · · · · · · · · ·		
rotocol		-	***************************************		COYL.			000:1 7	A.,			
SURV OSSIBLE SAMPI						Pri	ority: 45 Days	Offsite Property No	•			
** ** Contains Rad: cleasable per DOE Orc	ioactive Materia	l at con	centrations that	are not regula	ited for transportation pe	49 CFR but are not	SPECIAL INSTRUCTIONS  All Labs except WSCF: Batch all PNNL se closure of 14 days.  WSCF: Batch all PNNL GW samples subm		I, S, and W 07 SAFs i	Exemption: Yes 🗹 N nto one SDG, not to exceed	Vo d SDG	
Sample No.	Lab ID	*	Date	Time	No/Type Containe	r	Sample Analysis	William Co.	-	Preservative		
B1L3X1			11-20-06	1015	1x1000-mL P	906.0_H3_LSC:		No	ne	1 TOSCIVATIVE		
B1L3X1		W	1	1	1x20-mL P	Activity Scan		No				
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E. M. HALL			DOL.	<b>NO</b>	V 2 0 2006	DAVID HI		NOV 2 0 2006	40	Matrix *		
elinquished By			771	110			TROMAS		S = Soil	DS = Dm	ım Sali	
-					Date/Time	Received By		Date/Time	SE = Sedin SO = Solid	$\begin{array}{rcl} \text{pent} & \text{DI.} &= \text{Drur} \\ \text{T} &= \text{Tiss} \end{array}$	ım Lia	
elinquished By									SI. = Sludg W = Water	e WI = Win	ne	
		_			Date/Time	Received By		Date/Time	O = Oil A = Air	$ \begin{array}{rcl} I_{\cdot} &=& \text{Lim} \\ V &=& \text{Veg} \\ X &=& \text{Othe} \end{array} $	getation	
clinquished By		-	*******	***************************************	Date/Time	Received By		Date/Time				
FINAL SAMPLE	Disposal M	ethod (	e.g., Return to c	customer, per	lab procedure, used in pr	ocess)	Disposed By	enterior and the second		Date/Time		
DISPOSITION	1						• •					



# Sample Check-in List

		20.06 1500			
Client:_	Pow)	SDG #: W5	068 NA[]	SAF#: <u>507-011</u>	NA[]
Work O	rder Number: <u>UG</u>	K210263	Chain of Custod	y# <u>507-011-70</u>	164,58
Shippin	g Container ID:		Air Bill #		
1.	Custody Seals on	shipping container intact	?	NA[] Yes / No	0[]
2.	Custody Seals dat	ed and signed?		NA[] Yes [] N	0[]
3.	Chain of Custody	record present?		Yes N	0[]
4.	Cooler temperatur	re:NA // 5	.Vermiculite/packi	ng materials is NA 🖊	Wet [ ] Dry [ ]
6.	Number of sample	es in shipping container:_	3		
7.	Sample holding ti			NA [ Yes [ ] N	0[]
8.	Samples have:tapecustody sea	łs .		azard labels ppropriate samples lab	els
9.	Samples are:in good conbroken	dition	h	eaking ave air bubbles or samples requiring h	ead space)
10.	Sample pH taken	NA[] pH	<2[] pH>2/	pH>9[]	
11,	Sample Location, *For documentati	Sample Collector Listed on only. No corrective a	? * ction needed.	Yes [/]	No [ ]
12.	Were any anomal	ies identified in sample re	eceipt?	Yes [ ]	No N
13.	Description of and	omalies (include sample)	numbers):		_
Sample	Custodian: DA	<u>+</u>	Date:	11-20-06 (	500
Cli	ent Sample ID	Analysis Requested	Conditi	on Com	ments/Action
Client Ir	nformed on	by	Person o	contacted	
[ ] No	action necessary; pro	ocess as is.			
Project l	Manager		Date		and the state of t
	9/03, Rev. 5				

115

#### Seger, Sandra

From:

Stewart, Dorothy L [dot.stewart@pnl.gov]

Sent:

Thursday, December 21, 2006 4:21 PM

To:

Adam, Sherryl; Seger, Sandra

Cc:

Felmy, Diana; Hampt, Heidi; Waters-Husted, Karen S

Subject:

FW: W05068 - IRF For Samples B1L619 & B1L615

Attachments: IRFW05068.DOC

Accept proposal. Heidi will follow up with the completed IRF when she returns after the holidays. Diana-please note we will have to make this adjustment in our tracking system for samples that were previously order with the TEVA. Karen- please schedule using the non TEVA disk method for future iodine LL samples to STL Richland. If possible, please make this adjustment to the January paperwork.

Thanks, Dot

**From:** Seger, Sandra [mailto:SSeger@stl-inc.com] **Sent:** Thursday, December 21, 2006 7:01 AM

To: Stewart, Dorothy L

Cc: Felmy, Diana; Hampt, Heidi; Adam, Sherryl

Subject: W05068 - IRF For Samples B1L619 & B1L615

Dot,

Please refer to the attached IRF.

Thanks, Sandra

<<IRFW05068.DOC>>

Confidentiality Notice: The information contained in this message is intended only for the use of the addressee, and may be confidential and/or privileged. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

# STL RICHLAND ISSUE RESOLUTION FORM FOR CONTRACT 615 WITH BHI/FH/PNNL

PNNL Tracking Number: 07-1

SAF No.: W07-011 Date: December 21, 2006

SDG: W05068

Sample No.(s) B1L619, B1L615

Submitted By: Sherryl Adam

Submitted To: **Dot Stewart (PNNL)** 

Phone No. 509-375-3131 x164

Fax No. 509-375-5590

Phone No. <u>509-376-5056</u> Fax No. <u>509-372-1704</u>

#### **ISSUE**

#### PROPOSED RESOLUTION

Method 1129LL\_ETVDSK\_SEP\_GS: I-129\_ETVDSK (1) was requested.

Analyzed the samples mentioned above by method I129LL\_SEP\_LEPS\_GS\_LL: I-129(1).

Thanks

### **BHI/FH/PNNL COMMENTS -**

Accept proposed resolution.

Heidi Hampt for Dot Stewart 1/2/07

Signature and date

117

#### Seger, Sandra

From:

Hampt, Heidi [heidi.hampt@pnl.gov]

Sent:

Tuesday, January 02, 2007 2:27 PM

To:

Seger, Sandra; Stewart, Dorothy L

Cc:

Felmy, Diana; Adam, Sherryl

Subject:

RE: W05068 - IRF For Samples B1L619 & B1L615

Attachments: 07-1.DOC

**From:** Seger, Sandra [mailto:SSeger@stl-inc.com] **Sent:** Thursday, December 21, 2006 7:01 AM

To: Stewart, Dorothy L

Cc: Felmy, Diana; Hampt, Heidi; Adam, Sherryl

Subject: W05068 - IRF For Samples B1L619 & B1L615

Dot,

Please refer to the attached IRF.

Thanks, Sandra

<<IRFW05068.DOC>>

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12/19/2006 1:10:21 PM		Sam	ple Prepa	aration/An	alvsis		Palance	Id:1120482733	
384868, Pacific Northwest Nacific Northwest National L	Vational Laboratory , ab	AZ Gross Alpha S7 Gross Alpha	PrpRC5014		•			t#: <u>935</u>	
AnalyDueDate: 01/01/200	17 WOSOLD	51 CLIENT: HAI		ng Am-241 cu	rve		Sep1 DT/Tm Ted		
Batch: 6331345 WAT			PM, Qu	ote: SA , 57	671		Sep2 DT/Tm Tec		
								ch: ,BockJ /Ap	'.Δ.
	otal    Initial Aliquo nt/Unit    Amt/Unit	t QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JJ2VD-1-AC	201.40g,in		1.5	50.1	50	1			
J6K180164-1-SAMP				JU . 1		10A	1917	12/29/0	600
11/17/2006 13:02		20ML,500ML,2XLP	#Containers: 4			Sor:	Alpha: -8.37E-05 uCi/Sa	Beta: -2.	47E-04 uCi/Sa
2 JJ2VN-1-AC J6K180164-2-SAMP	187.70g,in			47.2	.50				
						10B	<u> </u>		
11/17/2006 12:00 3 JJ2V1-1-AC	AmtRec	20ML,500ML,2XLP,4LP	#Containers: 5			Scr:	Alpha: -3.39E-04 uCi/Sa	Beta: 5.8	82E-04 uCi/Sa
J6K180164-3-SAMP	75.10g,in			52-7	100	10A 1620			
11/17/2006 11:05		20ML,500ML,6XLP,3X4LP							
4 JJ2V1-1-AL-X	73.50g,in	ZUML, SUUML, GALP, SA4LP	#Containers: 1	<u> </u>	(00)	Scr:	Alpha: 6.29E-03 uCi/Sa	Beta: -7.4	41E-04 uCi/Sa
J6K180164-3-DUP		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		44.3		18h J			
11/17/2006 11:05		20ML,500ML,6XLP,3X4LP	#Containers: 11			Scr.	Alpha: 6.29E-03 uCi/Sa	Reta: -7	41E-04 uCi/Sa
5 JJ2WR-1-AC J6K180164-5-SAMP	199.50g,in			0.4	50		Angeles and the second second	Deta7.	41L-04 UOV38
TOOK 100 104-5-5-SAMP						100	1917		
11/17/2006 07:00		20ML,500ML,2XLP,3X4LP	#Containers: 7			Scr:	Alpha: 2.30E-03 uCi/Sa	Beta: -1,2	26E-03 uCi/Sa
6 JJ2W4-1-AC J6K180164-6-SAMP	146.50g,in			420	100 10 C	1, 1620			
### DESCRIPTION OF THE PROPERTY OF THE PROPERT						·			
11/17/2006 08:31 7 JJ2XD-1-AC	AmtRec: 125.70g,in	20ML,500ML,2XLP,3X4LP	#Containers: 7		. ~~	Scr:	Alpha: 2.27E-03 uCi/Sa	Beta: -2.4	19E-03 uCi/Sa
J6K180164-7-SAMP	123.70g,III			41.5	100 10	ID V			
11/17/2006 10:14	AmtRec:	20ML,500ML,6XLP,3X4LP	#Containers: 11	<del></del>		Scr:	Alpha: 3.37E-03 uCi/Sa	Rota: 4.5	04E 02 u0//0
		The state of the s					, aprila, 0.57 E-00 UOV04	Deta4,2	24E-03 uCi/Sa
STL Richland Key: In - Init	tial Amt, fi - Final Amt, di - I	Diluted Amt, s1 - Sen1.	s2 - Sen2 F	Page 1	191/	- Insufficient Volur	no for Analysis	, A /	O Cnt: 7
	ep Dt, r - Reference Dt, ec-Er			-30 .	131	MODIFICION VOIDE	ne ioi Analysis		O Cnt: 7 SamplePrep v4.8.26

12/19/2006 1:10:24 PM		Sam	nple Prepai	ration/Ar	alysis		Balan	nce ld:1120482733	
		AZ Gross Alpha S7 Gross Alpha		g Am-241 c	urvo			Pipet #:	
AnalyDueDate: 01/01/2007		51 CLIENT: HAI		9 AIII-241 C	uive		Sep1 DT/Tm	1 Tech:	
Batch: 6331345 SEQ Batch, Test: None	pCi/L		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				Sep2 DT/Tm	n Tech:	
							Prep	Tech: ,BockJ	
Work Order, Lot, Total Sample DateTime Amt/U	nit Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 JKDFV-1-AA-B	200.10g,in		1,5	6.7	100	10F	16 20	12/29/0600	
J6K270000-345-BLK 				U . (					************************
11/17/2006 11:05	AmtRec:	#Container	rs: 1			Scr:	Alpha:	/	Beta:
9 JKDFV-1-AC-C J6K270000-345-LCS {	200.80g,in	asd4074 11/09/06,pd 02/09/06,r	1	0.8	100		1812		
11/17/2006 11:05	AmtRec:	#Container	rs: 1			Scr:	Alpha:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Beta:
	omments								
Comments: JJ2W4-SAMP C	S. M. Otto								
ll Clients for Batch: 384868, Pacific Northwe	st National Laborator	FY Pacific N	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				ea. Sang.	12/29/06 A	PA
Il Clients for Batch: 384868, Pacific Northwe J2VD1AC-SAMP Constituent L ALPHA RDL:3	st National Laborator						ea. Sang.	12/29/06 A	PA .
Il Clients for Batch: 384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3	st National Laborator	UCL:	Northwest Nat				ea. Sang.	12/29/06 A	PA .
Il Clients for Batch: 384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL:	st National Laborator ist: pCi/L LCL:	UCL: UCL:	Northwest Nat				ea. Sung.	12/29/06 A	PA .
Il Clients for Batch: 384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL: J2VD1AC-SAMP Calc Info: Uncert Level (#s).: 2	st National Laborator ist:     pCi/L LCL:     pCi/L LCL:	UCL: UCL: UCL:130	Northwest Nat  RPD:  RPD:  RPD:	ional Lab,			ea. Sang.	12/29/06 A	PA
Il Clients for Batch: 384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL: J2VD1AC-SAMP Calc Info:	st National Laborator ist:     pCi/L LCL:     pCi/L LCL:     pCi/L LCL:	UCL: UCL: UCL:130 Blk Subt.: N	Northwest Nat  RPD:  RPD:  RPD:20  Sci.Not	ional Lab,	SA , 57671		en. Sang.	12/29/06 A	PA
Il Clients for Batch: 384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL: J2VD1AC-SAMF Calc Info: Uncert Level (#s):: 2 KDFV1AA-BLK: Uncert Level (#s):: 2	st National Laborator ist:     pCi/L LCL:     pCi/L LCL:     pCi/L LCL:70     Decay to SaDt: Y	UCL: UCL: UCL:130 Blk Subt.: N Blk Subt.: N	RPD: RPD: RPD: RPD:20 N Sci.Not	ional Lab, .: Y O	SA , 57671		ea. Sang.	12/29/06 A	PA
Il Clients for Batch:     384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL: J2VD1AC-SAMP Calc Info:     Uncert Level (#s).: 2 KDFV1AA-BLK:     Uncert Level (#s).: 2 KDFV1AC-LCS:	st National Laborator ist:     pCi/L LCL:     pCi/L LCL:     pCi/L LCL:70     Decay to SaDt: Y     Decay to SaDt: Y	UCL: UCL: UCL:130 Blk Subt.: N Blk Subt.: N	RPD: RPD: RPD: RPD:20 N Sci.Not	ional Lab, .: Y O	DRs: B		en. Sung.		
Il Clients for Batch:     384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL: J2VD1AC-SAMP Calc Info:     Uncert Level (#s).: 2 KDFV1AA-BLK:     Uncert Level (#s).: 2 KDFV1AC-LCS:	st National Laborator ist:     pCi/L LCL:     pCi/L LCL:     pCi/L LCL:70     Decay to SaDt: Y     Decay to SaDt: Y	UCL: UCL: UCL:130 Blk Subt.: N Blk Subt.: N	RPD: RPD: RPD: RPD:20 N Sci.Not	: Y O	DRs: B				
Il Clients for Batch:     384868, Pacific Northwe  J2VD1AC-SAMP Constituent L ALPHA RDL:3 KDFV1AA-BLK: ALPHA RDL:3 KDFV1AC-LCS: Am-241 RDL: J2VD1AC-SAMF Calc Info:     Uncert Level (#s):: 2 KDFV1AA-BLK:     Uncert Level (#s):: 2 KDFV1AC-LCS:     Uncert Level (#s):: 2	st National Laborator ist:     pCi/L LCL:     pCi/L LCL:     pCi/L LCL:70     Decay to SaDt: Y     Decay to SaDt: Y	UCL: UCL: UCL:130 Blk Subt.: N Blk Subt.: N Blk Subt.: N	RPD: RPD: RPD:20 N Sci.Not N Sci.Not N Sci.Not	: Y O	DRs: B DRs: B DRs: B			Date:	

4/2007 1:50:22 PM 84868 Pacific Northwest Nation	The state of the s	Sar	nple Prep	aration/Ana	alysis		Balance Id:1120482733				
acific Northwest National Lab	nal Laboratory ,	BC Gross Beta S8 Gross Beta 51 CLIENT: HA	by GPC usin	g Sr/Y-90 curv	e		P Sep1 DT/Tm	ipet #: <u>235</u> Tech:			
nalyDueDate: 01/01/2007 (atch: 7003498 WATER EQ Batch, Test: None	pCi/L		PM, Q	uote: SA , 576	671		Sep2 DT/Tm	Tech:			
EQ Batch, Test: None			Parket				Prep Tech: ,BockJ / A PA				
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot t Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
JJ2WR-3-AD	201.60g,in		1	5 0.7	. D(	A	, O .	1/./			
K180164-5-SAMP 			· / ·	7	150	261	1322	19/015			
/17/2006 07:00	^ AmtRec:	20ML,500ML,2XLP,3X4l	.P #Containers:	7		Scr:	Alpha: 2/30E-03 ut	Ci/Sa ∫ Beta:	-1.26E-03 uCi/Sa		
J2WR-3-AH-X	195.90g,in			0.5		110					
(180164-5-DUP						265					
117/2006 07:00	AmtRec:	20ML,500ML,2XLP,3X4L	.P #Containers:	7)		Ser:	Alpha 2.30E-03 u	Ci/Sa Beta:	-1.26E-03 uCi/Sa		
MDMG-1-AA-B	203.90g,in			0.1							
4030000-498-BLK 		**************	/-	<i>(</i>		260					
11   12   14   14   14   14   1   1   1   1   1	AmtRec:	#Contain	iers: 1			Scr:	Alpha:		Beta:		
JMDMG-1-AC-C	199.70g,in	BESB2978 12/21/06,pd		0.2		212		,			
A030000-498-LCS		08/08/06,r				260					
	AmtRec:	#Contair	ners: 1			Scr:	Alpha:		Beta:		
Comments: PH (2.0	t National Laborato	10010 CC		andded			1/9/07 F	<del>1</del> 82			
2WR3AD-SAMP Constituent Li	.st:										
BETA RDL:4 DMG1AA-BLK:	pCi/L LCL:	UCL:	RPD:								
BETA RDL:4 DMG1AC-LCS:	pCi/L LCL:	UCL:	RPD:								
Sr-90 RDL: 2WR3AD-SAMP Calc Info:	pCi/L LCL:70	UCL:130	RPD:20								
									WO Cnt: 4		

V1/2/2007 8:31:44 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory, BC Gross Beta PrpRC5014 Pacific Northwest National Lab Pipet #: S8 Gross Beta by GPC using Sr/Y-90 curve AnalyDueDate: 01/01/2007 5I CLIENT: HANFORD Sep1 DT/Tm Tech: Batch: 6331346 WATER pCi/L PM, Quote: SA, 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None All Tests: 6331331 ARS6, 6331338 AAS4, 6331339 FPS5, 6331345 AZS7, 6331346 BCS8, 6331348 AWTA, 6331349 H3TB, 6331351 CLTL, 6331352 BNTB, 6360197 BNTB, Prep Tech: ,BockJ Work Order, Lot. Total Initial Aliquot QC Tracer Dish Pot or Count Detector Count On I Off CR Analyst Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min Ιđ (24hr) Circle Init/Date 1 JJ2VD-1-AD 199.80q,in J6K180164-1-SAMP 11/17/2006 13:02 AmtRec: 20Mi 500Mi 2XLP #Containers: 4 Scr: Alpha: -8.37E-05 uCi/Sa Beta: -2.47E-04 uCi/Sa 2 JJ2VN-1-AD 201.00a.in J6K180164-2-SAMP 11/17/2006 12:00 AmtRec: 20ML,500ML.2XLP,4LP #Containers: 5 Alpha: -3.39E-04 uCi/Sa Beta: 5.82E-04 uCi/Sa 3 JJ2V1-1-AD 77.30a.in J6K180164-3-SAMP AmtRec: 20ML,500ML,6XLP,3X4LP #Containers: 11 Alpha: 6.29E-03 uCi/Sa Beta: -7.41E-04 uCi/Sa 4 JJ2WR-1-AD 200.80a.in J6K180164-5-SAMP 11/17/2006 07:00 AmtRec: 20ML,500ML,2XLP,3X4LP #Containers: 7 Alpha: 2.30E-03 uCi/Sa Beta: -1.26E-03 uCi/Sa 5 JJ2WR-1-AH-X 200.50q,in J6K180164-5-DUP 11/17/2006 07:00 AmtRec: 20ML.500ML.2XLP.3X4LP #Containers: 7 Scr: Alpha: 2.30E-03 uCi/Sa Beta: -1.26E-03 uCi/Sa 6 JJ2WR-2-AD 200.84 100 min J6K180164-5-SAMP 11/17/2006 07:00 AmtRec: 20ML,500ML,2XLP,3X4LP #Containers: 7 Alpha: 2.30E-d3 uCi/Sa Beta: -1.26E-03 uCi/Sa 7 JJ2WR-2-AH-X 200.5 J6K180164-5-DUP 11/17/2006 07:00 AmtRec: 20ML,500ML,2XLP,3X4LP #Containers: 7 Scr: Alpha: 2.30E-03 uCi/Sa Beta: -1.26E-03 uCl/Sa STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 ISV - Insufficient Volume for Analysis WO Cnt: 7 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ICOC v4.8.26

#### /2/2007 8:31:45 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory . BC Gross Beta PrpRC5014 Pipet #: \_\_\_\_\_ Dacific Northwest National Lab S8 Gross Beta by GPC using Sr/Y-90 curve AnalyDueDate: 01/01/2007 5I CLIENT: HANFORD Sep1 DT/Tm Tech: WATER Batch: 6331346 pCi/L PM, Quote: SA, 57671 Sep2 DT/Tm Tech: ASEQ Batch, Test: None Prep Tech: BockJ Work Order, Lot, Total QC Tracer Count Count On | Off Initial Aliquot Dish Ppt or Detector CR Analyst, Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min ld (24hr) Circle Init/Date 8 JJ2W4-1-AD 159.70g.in J6K180164-6-SAMP 11/17/2006 08:31 AmtRec: 20ML,500ML,2XLP,3X4LP #Containers: 7 Scr: Alpha: 2.27E-03 uCi/Sa Beta: -2.49E-03 uCi/Sa 9 JJ2XD-1-AD 140.40a.in J6K180164-7-SAMP AmtRec: 20ML,500ML,6XLP,3X4LP #Containers: 11 Scr: Alpha: 3.37E-03 uCi/Sa Beta: -4.24E-03 uCi/Sa 10 JKDF0-1-AA-B 201.80a,in J6K270000-346-BLK 11/17/2006 07:00 AmtRec: #Containers: 1 Scr: Beta: 11 JKDF0-1-AC-C 200.10a.in besb2969 11/21/06.pd J6K270000-346-LCS 08/08/06.r 11/17/2006 07:00 AmtRec: #Containers: 1 Scr: Beta: Alpha: Comments: JJ2W4-SAMP Comments All Clients for Batch: 384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SA, 57671 JJ2VD1AD-SAMP Constituent List: BETA RDL:4 pCi/L UCL: RPD: LCL: JKDF01AA-BLK: BETA RDL: 4 pCi/L UCL: RPD: LCL: JKDF01AC-LCS: Sr-90 RDL: pCi/L LCL:70 UCL:130 RPD:20 JJ2VD1AD-SAMP Calc Info: WO Cnt: 11 ISV - Insufficient Volume for Analysis STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ICOC v4.8.26 Richland Wa pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

SIL	
R H	
CHLAND	

12/18/2006 1:25:53 PM		Sample P	reparation	on/Analysi	s	Raia	14.110040	2220			
384868, Pacific Northwest National	Laboratory ,	CL Sr-90 Prp/SepRC500					Balance Id:1120482733				
Pacific Northwest National Lab	,	TL Sr-85 by Nal and Sr-	-90 by GPC	7 day ingrow	⁄th		Pipet #:	1 , DEC	· · · · · · · · · · · · · · · · · · ·		
AnalyDueDate: 01/01/2007	125008	51 CLIENT: HANFORD				Sep1 DT/Tr	n Tech: [9/19/	(00 Ato.	19 PM		
Batch: 6331351 WATER SEQ Batch, Test: None	pCi/L	PN	/I, Quote: S	SA , 57671		Sep2 DT/Tr	n Tech: / 4/2°	9/06 1:07	群		
		7 10					p Tech: ,Bock				
Work Order, Lot, Total	Initial Aliquot	QC Tracer Tracer	Dish	Pptor	Count	Detector Count On			comments:		
Sample DateTime   Amt/Unit	Amt/Unit	Prep Date Yield	Size	Geometry	Time Min	ld (24hr) Cir	cle Init/	Date	Jimments.		
1 J <b>J2N9-1-AD</b> J6K180149-3-SAMP	1004.30g,in	srtb14281 (.Q.L.7) 12/05/06,pd			100		10.1	2			
		09/11/06,r X.OMS	*****			9" 6602	/ 18/2	100			
911 (32 182 3 2 11		VIA18688 0,8170		234		DS 093	2 17/3	1/2			
		Ex.7/25/2007				3 d 090		31/06 L			
11/17/2006 09:46	AmtRe	ec: 20ML,2X500ML,4XLP,4LP #Contai	iners: 8			Scr: Alpha: 4.87E-03 uCi/S	Co 225011	Pain # 10E 05.	010-		
2 JJ2N9-1-AG-X	1004.50g,in	srtb14282 \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	/			Oor. Alpha, 4.072-03 dogs	A J.SE-UIL	Beta: -4.18E-05 u	JCVSa		
J6K180149-3-DUP		12/05/06,pd 2.0245				3º1 ileor	18/1/18	<i>r</i> ,			
International Control of Control	1号 经股份证券 化水子水管 医甲状腺 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	C808, 0						<u> </u>			
, 44 m h		YTA16689 ULUU	>	~~		JC 0927	_	21/15			
				231		4n 0909	7 12	31/06 R			
11/17/2006 09:46		ec: 20ML,2X500ML,4XLP,4LP #Contai	ners: 8			Scr: Alpha: 4.87E-03 uCi/S	a 3.3E-01L	Beta: -4.18E-05 u	uCi/Sa		
3 JJ2V1-1-AH J6K180164-3-SAMP	1006.40g,in	srtb14283 \ . 3\ 12/05/06,pd				^ ^	181	7			
JON 160 164-3-SAMP		09/11/06,r &, CS97	************************	***************************************		97 11/03	6 pill	16			
# # # # # # # # # # # # # # # # # # #		P840, C (681, N)		***		20 095	7 以	:15			
	**************	Extif23/2007		23.6		4B 090	_	131/06	<u>K</u>		
11/17/2006 11:05	AmtRe	ec: 20ML,500ML,6XLP,3X4LP #Contain	44					+			
4 JJ2XD-1-AH	1005.60g,in	srtb14284	ners: (1		+	Scr: Alpha: 6.29E-03 u	ıCi/Sa	Beta: -7,41E-04 u	JCi/Sa		
J6K180164-7-SAMP	. 9 4 5 7 4 5 1	12/05/06,pd		(	Hc	37 11-01.	18/ 1				
POSITION OF THE POSITION OF T			·	**		0034	10/20/4	<u> </u>			
		VTA 18691 (		_ ^		3/2 C424		?			
		Ex:7/23/200/		233		4 c 090°	1	2/31/06	r		
11/17/2006 10:14	AmtRe	ec: 20ML,500ML,6XLP,3X4LP #Contain	ners: 11			Scr: Alpha: 3.37E-03 u	ıCi/Sa	Beta: -4.24E-03 u	uCi/Sa		
	*		100 May 1								
STL Richland Key: In - Initial Amt,	fi - Final Amt di	- Diíuted Amt, s1 - Sep1, s2 - Sep				The state of the s	The state of the s				
OIL INCHIGIU NOV. HIT HIMALOGIC	II - FIGH ADD DE-	<ul> <li>Diluted Amt_s1 - Sen1_s2 - Sen</li> </ul>	2 Page 1		ISV - Incuffi	icient Volume for Analysis		WO Cn	ıt· Δ		

12/18/2006 1:25:54 PM			ample Pre		Analysis	MANAGEMENT TO TAKE THE SECOND		Balance	e ld:11204827	733
		CL Sr-90 Pr	o/SepRC5006( Nal and Sr-90	5071) by GPC 7 da	v ingrowth	•		Pip	et #:	
AnalyDueDate: 01/01/2007		51 CLIENT:		by Gro Tue	y mgrowth	•	5	Sep1 DT/Tm T	ech:	
Batch: 6331351 SEQ Batch, Test: None	pCi/L	***************************************		**************************************				Sep2 DT/Tm T	ech:	
GEQ Batch, Test. None			112051		5 8 8 m 6 E 5 m m m		B B 謝 B B B B B B	Prep T	ech: ,BockJ	
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield		Ppt or eometry	Count Time Min	Detector Id	Count On Of (24hr) Circle	f CR Anal Init/Da	
5 JKDGC-1-AA-B J6K270000-351-BLK	1000.20g,in	srtb14285 \ 12/05/06,pd 09/11/06,r \(\mathcal{Z}\),	.500 0524			100	9"	0711	19/201	aes
		YTA16692 Ex-7/23/2007	.7601	2	3.9		33 4d	0907	12/3/	31/06 n
11/17/2006 09:46	AmtRec	#Con	tainers: 1				Scr:	Alpha:		Beta:
6 JKDGC-1-AC-C J6K270000-351-LCS	1000.90g,in	srsg1293 (, 12/18/06,pd 09/11/06,r Q, 12/18/06,pd 09/11/06,r Q, 12/14/18/09 () (14/14/18/18/18/18/18/18/18/18/18/18/18/18/18/	010 0959 8243	2	3.9	87	3 <sup>7</sup> 3C	0711 0937 + 1109	12/3/2005	31/06 K
11/17/2006 09:46	AmtRec	#Con	tainers: 1				Scr:	Alpha:		Beta:
All Clients for Batch:	AB 12-18-00				Mantagaran and a grant grant					
384868, Pacific Northwest		ry Pacif	ic Northwest	National La	b, SA,	57671				
JJ2N91AD-SAMP Constituent Lis	st: pCi/L LCL:20	UCL:105	RPD:20	Sr-90	RDL	:2	pCi/L	LCL:70	UCL:130	RPD:20
JKDGC1AA-BLK: Sr-85 RDL:	pCi/L LCL:20	UCL:105	RPD:20	Sr-90	RDL	: 2	pCi/L	LCL:	UCL:	RPD:
JKDGC1AC-LCS: Sr-85 RDL:	pCi/L LCL:20	UCL:105	RPD:20	Sr-90	RDL	:2	pCi/L	LCL:70	UCL:130	RPD:20
JJ2N91AD-SAMP Calc Info: Uncert Level (#s).: 2 JKDGC1AA-BLK:	Decay to SaDt: Y	Blk Subt	.: N Sci	.Not.: Y	ODRs: B					
	umt, fi - Final Amt, di - t, r - Reference Dt, ec-Er			Page 2		ISV - Insuffi	cient Volume fo	or Analysis		WO Cnt: 6 Prep_SamplePrep v4.8.26

STL	
RH	
CHLAND	

12/18/2006 1:25:55 PM		Sai	mple F	Preparatio	n/Analys	s		Balance lo	i:1120482733	
		CL Sr-90 Prp/S TL Sr-85 by Na			day ingrow	rth		Pipet :	#:	
AnalyDueDate: 01/01/200	7	51 CLIENT: H						Sep1 DT/Tm Tech	1:	
Batch: 6331351 SEQ Batch, Test: None	pCi/L							Sep2 DT/Tm Tech	1:	
								Prep Tech	n: ,BockJ	
Work Order, Lot, Tot Sample DateTime Amb	A	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Uncert Level (#s): UKDGC1AC-LCS:	2 Decay to SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs:	3		1		
Uncert Level (#s).:	2 Decay to SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs:	В				

Approved By \_\_\_

12/19/2006 9:41:07 /	λM.	
384868, Pacific North Pacific Northwest Natio	west National onal Lab	Laboratory ,
AnalyDueDate: 01/0	1/2007	RIVER
Batch: 6331348 SEQ Batch, Test: None	WATER	pCi/L
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit
1 JJ2NX-1-AC		1999.60g,in
J6K180149-1-SAMP 	CONTRACTOR OF THE CONTRACTOR O	AmtRec: 2
2 JJ2N2-1-AC J6K180149-2-SAMP		2000.30g,in
11/17/2006 08:58		AmtRec: 2
3 JJ2N9-1-AC		1999.80g,in
J6K180149-3-SAMP 	Andrews STOROGOM STOR	AmtRec: 2
4 LI2TP-1-AC	***************************************	2002 200-1-

Sample	Preparation/Analy	/sis

AW Gamma PrpRC5017 TA Gamma by HPGE

Balance	ld:1120482733
Salance	10:1120482733

Pipet #:

51 CLIENT: HANFORD Sep1 DT/Tm Tech: PM, Quote: SA, 57671 Sep2 DT/Tm Tech: Prep Tech: ,BockJ / APA QC Tracer Dish Ppt or Count Detector Count On | Off CR Analyst, Comments: Prep Date Size Geometry Time Min ld (24hr) Circle Init/Date 100ml 100 ML,500ML,4XLP,4LP #Containers: 7 Scr: Alpha: 4.62E-03 uCi/Sa 3.3E-01L Beta: -4.01E-05 uCi/Sa  $\Omega/I$ DML,2X500ML,LP,4LP #Containers: 5 Scr: Alpha: 1.51E-03 uCi/Sa Beta: 4.67E-04 uCi/Sa DML,2X500ML,4XLP,4LP #Containers: 8 Scr: Alpha: 4.87E-03 uCi/Sa 3.3E-01L Beta: -4.18E-05 uCi/Sa 4 JJ2TP-1-AC 2003.00g,in J6K180149-5-SAMP 11/17/2006 11:48 AmtRec: 20ML,2X500ML,LP,4LP #Containers: 5 Scr: Alpha: 1.69E-03 uCi/Sa Beta: -4.54E-04 uCi/Sa 5 JJ2VN-1-AE 2000.00g,in J6K180164-2-SAMP 11/17/2006 12:00 AmtRec: 20ML,500ML,2XLP,4LP #Containers: 5 Alpha: -3.39E-04 uCi/Sa Beta: 5.82E-04 uCi/Sa 6 JJ2V1-1-AE 1999.50q.in J6K180164-3-SAMP 512 Management of the control of the con 11/17/2006 11:05 AmtRec: 20ML,500ML,6XLP,3X4LP #Containers: 11 Scr: Alpha: 6.29E-03 uCi/Sa Beta: -7.41E-04 uCi/Sa 7 JJ2WR-1-AE 2007.20g,in J6K180164-5-SAMP 11/17/2006 07:00 AmtRec: 20ML,500ML,2XLP,3X4LP #Containers: 7 Scr: Alpha: 2.30E-03 uCi/Sa Beta: -1.26E-03 uCi/Sa STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep\_SamplePrep v4.8,26

12/19/2006 9:41:09 AM 384868, Pacific Northwest Natio Pacific Northwest National Lab		Samj W Gamma PrpR TA Gamma by Hi	C5017	ration/Ana	ılysis			ld:1120482733	
AnalyDueDate: 01/01/2007		51 CLIENT: HAN					Sep1 DT/Tm Te	ch:	
Pacific Northwest National Lab AnalyDueDate: 01/01/2007 Batch: 6331348 WATER SEQ Batch, Test: None	pCi/L		PM, Qu	ote: SA , 576	71		- Sep2 DT/Tm Te	ch:	
ora buton, rest. None	•						Prep Te	ch: BockJ	
Work Order, Lot, Total Sample DateTime Amt/Ur	Initial Aliquot nit Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 JJ2W4-1-AE	1950.20g,in			1002	1150	/		1.1 1	
J6K180164-6-SAMP				1000-	1	64	0822	18/07/Uers	
11/17/2006 08:31	AmtRec: 20N	L,500ML,2XLP,3X4LP	#Containers: 7			Scr:	Alpha: 2.27E-03 uCi/Sa	Beta: -2	2.49E-03 uCi/Sa
9 JJ2W4-1-AH-X	1882.70g,in				- Andrews	1/			
J6K180164-6-DUP 	~~~~ <u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>					65	0855	/	
11/17/2006 08:31	AmtRec: 20N	L,500ML,2XLP,3X4LP	#Containers: 7			Scr:	Alpha: 2.27E-03 uCVSa	Beta: -2	2.49E-03 uCi/Sa
10 JJ2XD-1-AE	2005.10g,in					/ /			
J6K180164-7-SAMP 		3 3 3 5 5 F F F F F F 4 4 4 5 F 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6				66	0827		
11/17/2006 10:14	AmtRec: 20N	IL,500ML,6XLP,3X4LP	#Containers: 11			Scr:	Alpha: 3.37E-03 uCi/Sa	Boto	045 00020-
11 JKDF4-1-AA-B	2000.40g,in					001.	Alpha. 3.37 E-03 (101/3)	beta: -4	.24E-03 uCi/Sa
J6K270000-348-BLK	-					1,8	0666		
11/17/2006 08:31	AmtRec:	#Containers	s: 1			Scr:	Alpha:		Beta:
12 JKDF4-1-AC-C J6K270000-348-LCS	1999.90g,in	QCAG1309 11/07/06,pd 06/14/05,r		V	A	67	0856		
11/17/2006 08:31	AmtRec:	#Containers	s: 1		************	Scr:	Alpha:	····	Beta:
Comments: JJ2W4-SAMP "C		ml. aliquot due to ins	suffiecient sam	ple amount. JB	12/19/06 "				
All Clients for Batch: 384868, Pacific Northwe: JJ2NX1AC-SAMP Constituent L:		Pacific No	orthwest Na	tional Lab,	SA , 5767	1			
posimino-pame constituent Li	LSC:								
STL Richland Key: In - Initial	Amt, fi - Final Amt, di - Dilu							<u> </u>	

TTS	12/19/2006 9:41:10
RICI	AnalyDueDate: 01/0
ILAI	Batch: 6331348 SEQ Batch, Test: None

	1	2/1	9/	21	00	6	9:41	1:	1	0	Α	٨	ĺ
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# Sample Preparation/Analysis

Balance Id:1120482733 Pipet #: \_\_\_\_\_

AW	Gamma	PrpRC5017
TΑ	Gamma	by HPGE
51	CLIENT:	HANFORD

nalyDueDate: 01/01/2007

pCi/L

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ

***									Prep 1	Tech: ,BockJ	
Work Orde Sample Da		nit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst Init/Date	Comments
Co-60 Cs-137 Eu-154 K-40	RDL: 0.00E+00 RDL: 6.00E+00 RDL: 0.00E+00 RDL: 0.00E+00	pCi/L pCi/L pCi/L pCi/L	LCL: LCL:70 LCL: LCL:	UCL: UCL:130 UCL: UCL:	RPD: RPD:20 RPD: RPD:	Cs-134 Cs-137DA Eu-155 Sb-125	RDL:0.00 RDL:6.00 RDL:.001	0E+00 pC	i/L LCL: i/L LCL:70 i/L LCL:	UCL: UCL:130 UCL: UCL:	RPD: RPD:20 RPD: RPD:
CO-60 Cs-137 Eu-154 K-40	RDL:0.00E+00 RDL:6.00E+00 RDL:0.00E+00 RDL:0.00E+00	pCi/L pCi/L pCi/L pCi/L	LCL: LCL: LCL:	UCL: UCL: UCL: UCL:	RPD: RPD: RPD: RPD:	Cs-134 Cs-137DA Eu-155 Sb-125	RDL:0.00 RDL:6.00 RDL:.00E	DE+00 pC	i/L LCL: i/L LCL: i/L LCL: i/L LCL:	UCL: UCL: UCL: UCL:	RPD: RPD: RPD: RPD:
CKDF41AC-LC Cs-137 K-40 RA-228 U-238	RDL:15 RDL:6 RDL: RDL:	pCi/L pCi/L pCi/L pCi/L	LCL:70 LCL:70 LCL:70 LCL:70	UCL:130 UCL:130 UCL:130 UCL:130	RPD:20 RPD:20 RPD:20 RPD:20	Cs-137DA Ra-226 RA-228DA	RDL:15 RDL: RDL:	pC	i/L LCL:70 i/L LCL:70 i/L LCL:70	UCL:130 UCL:130 UCL:130	RPD:20 RPD:20 RPD:20
Uncert JKDF41AA-BL Uncert JKDF41AC-LC	: Level (#s).: 2	Decay	to SaDt: Y to SaDt: Y to SaDt: Y	Blk Subt.: Blk Subt.:	N Sci.Not	.: Y ODR	s: B s: B s: B				

STL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

ISV - Insufficient Volume for Analysis

Approved By \_\_\_\_\_

WO Cnt: 12

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

Prep\_SamplePrep v4.8.26

12/21/2006 11:45:43 AM 384868, Pacific Northwest National Pacific Northwest National Lab		Sam BN I-129 Prp/Se TB Gamma by L	pRC5025	aration/Ana	alysis	· · · · · · · · · · · · · · · · · · ·		ld:2113224201 t #:	
AnalyDueDate: 01/01/2007	W05068	51 CLIENT: HA	NFORD				Sep1 DT/Tm Te	ch:	
Batch: 6331352 WATER SEQ Batch, Test: None All Tests: 6331349 H3TB, 6331351 CLTL, 63313	<b>pCi/L</b> 6331331 ARS6, 6331338 352 BNTB,	AAS4, 6331339 F	FPS5, 6331345		BC\$8, 633		Sep2 DT/Tm Te Prep Te	ch: ch: ,BostedD	
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot	QC Tracer	Dish	Ppt or	Count	Detector	Count On   Off	CR Analyst,	Comments:
1 JJ2WH-1-AC		Prep Date	Size	Geometry	Time Min	ld	(24hr) Circle	Init/Date	
J6K180164-4-SAMP	3846.80g,in	ITA5813 11/10/06		33.0	100	12	1455	1/3/0704	)
TOTAL CONTROL OF THE PROPERTY				**************************************		/~ <del>/</del>	***	1 /	
11/17/2006 09:35		DML,500ML,LP,2X4LP	#Containers: 5			Scr:	Alpha: -8.67E-04 uCi/Sa	Beta: 7.	37E-04 uCi/Sa
2 JJ2WR-1-AF  J6K180164-5-SAMP	3819.00g,in	ITA5881 12/20/06		34.2		L4	1656		The state of the s
11/17/2006 07:00	AmtRec: 20	DML,500ML,2XLP,3X4LF	P #Containers: 7			Scr:	Alpha: 2.30E-03 uCi/Sa	Beta: -1.	26E-03 uCi/Sa
<b>3 JJ2WR-1-AJ-X</b> J6K180164-5-DUP	3829.70g,in	ITA5882 12/20/06		31.8		15	1657		
11/17/2006 07:00	AmtRec: 20	)ML,500ML,2XLP,3X4LP	P #Containers: 7			Scr:	Alpha: 2.30E-03 uCi/Sa	Beta: -1.	26E-03 uCi/Sa
<b>4 JJ2W4-1-AF</b> J6K180164-6-SAMP	3897.60g,in	ITA5883 12/20/06		34.3		L2	1440		
11/17/2006 08:31	AmtRec: 20	ML,500ML,2XLP,3X4LP	#Containers: 7			Scr:	Alpha: 2.27E-03 uCi/Sa	Beta: -2	49E-03 uCi/Sa
5 JKDGG-1-AA-B J6K270000-352-BLK	3687.10g,in	ITA5884 12/20/06		34.4		L4	1841		TOL OU DONG
11/17/2006 07:00	AmtRec:	#Container	ers: 1			Scr.	Alpha:		Beta:
6 JKDGG-1-AC-C J6K270000-352-LCS	3792.50g,in	ISD0704 12/14/06,pd 11/17/04,r		36.7	A.	LS	1841	0	DO
11/17/2006 07:00	AmtRec:	#Container	rs: 1			Scr.	Alpha:		Beta:
	t, fi - Final Amt, di - Dilu r - Reference Dt, ec-Enric			Page 1	ISV	- Insufficient Volun	ne for Analysis		O Cnt: 6 SamplePrep v4.8.2

12/21/2006 11:45:4 AnalyDueDate: 01				Sar BN I-129 Prp/St TB Gamma by 5I CLIENT: HA	epRC50 LEPD		ı/Analy	sis		Pi	pet #:	
Batch: 6331352 SEQ Batch, Test: Non-		pC	Si/L	or other, the		,				Sep1 DT/Tm 1 Sep2 DT/Tm 1		
			· · · · · · · · · · · · · · · · · · ·							Prep 1	Tech: ,BostedD	
Work Order, Lot, Sample DateTime	Total Amt/Unit		itial Aliquot Amt/Unit	QC Tracer Prep Date	Di:	ish Ppt o	or    (	Count ne Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments
Comments: JJ2W	tch:							www.				
38 <b>4</b> 868, Pacifi			Laboratory	Pacific	Northwe	est National	Lab, SA	, 5767:	1			
JJ2WH1AC-SAMP Cons I-129 RDL: JKDGG1AA-BLK:	tituent List 1.00E+00	t: pCi/L	LCL:	UCL:	RPD:						, , , , , , , , , , , , , , , , , , , ,	
I-129 RDL: JKDGG1AC-LCS: I-129 RDL:	1.00E+00 5	pCi/L	LCL:70	UCL: UCL:130	RPD:	n						
JJ2WH1AC-SAMP Calc Uncert Level		Decay to		Blk Subt.:		Sci.Not.: Y	ODRs:	В				
JKDGG1AA-BLK: Uncert Level JKDGG1AC-LCS:		Decay to		Blk Subt.:	n s	Sci.Not.: Y	ODRs:					
Uncert Level	(#s).: 2	Decay to	SaDt: Y	Blk Subt.:	n s	Sci.Not.: Y	ODRs:	В				
						App	roved By		****	······································	Date:	
							,					
STL Richland Key Richland Wa.				ited Amt, s1 - Sep1 hment Cell, ct-Cocl				ISV -	insufficient Vol	ume for Analysis		O Cnt: 6 SamplePrep v4.8

12/29/2006 12:13: 384868, Pacific Nor Pacific Northwest Na AnalyDueDate: 01 Batch: 6360197	thwest Nationa	•	Sam BN I-129 Prp/Sep TB Gamma by LI 5I CLIENT: HAN	RC5025 EPD	paration/Ana	alysis			ld:2113224201 : #:	
SEU Batch, Test: Noni	e All Tests: 651 CLTL, 6331	6331331 ARS6, 6331338 352 BNTB, 6360197 BNT	В,	S5, 633134		BCS8, 63313	48 AWTA,	Sep2 DT/Tm Tec	h: h: ,BostedD	
Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JJ2V1-1-AM J6K180164-3-SAMP		3922.30g,in	ita5872 12/20/06		32.0	100	L5	2046	1/3/010	, S
11/17/2006 11:05		AmtRec: 20N	ML,500ML,6XLP,3X4LP	#Containers:	11	1	Scr:	Alpha: 6.29E-03 uCi/Sa	Beta: -7.	41E-04 uCi/Sa
2 JJ2V1-1-AN-X J6K180164-3-DUP	American Ame	3913.70g,in	ita5873 12/20/06		32.1		24	2047		
11/17/2006 11:05 3 JJ2XD-1-AK	1 12 21 123 EL		IL,500ML,6XLP,3X4LP	#Containers:	11		Scr:	Alpha: 6.29E-03 uCi/Sa	Beta: -7.	41E-04 uCi/Sa
J6K180164-7-SAMP		3855.50g,in	ita5874 12/20/06		35.4		12/	2047		
11/17/2006 10:14	1		L,500ML,6XLP,3X4LP	#Containers:	11		Scr:	Alpha: 3.37E-03 uCi/Sa	8eta: -4.2	24E-03 uCi/Sa
4 JL43T-1-AA-B J6L260000-197-BLK		3403.20g,in	ita5875 12/20/06		33,3		12	0626		
11/17/2006 11:05		AmtRec:	#Containers:	1			Scr:	Alpha:		Beta:
5 JL43T-1-AC-C J6L260000-197-LCS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3589.20g,in	isd0706 12/14/06,pd 11/17/04,r		35,5	$\bigvee$	14	0027		
11/17/2006 11:05		AmtRec:	#Containers:	1			Scr:	Alpha:	b	Beta:
Comments:										
ll Clients for Bat 384868, Pacific J2V11AM-SAMP Const	Northwest 1	National Laboratory	Pacific No:	rthwest N	ational Lab,	SA , 57671				
I-129 RDL:1 STL Richland Key	: In ~ Initial Amt	cti/L LCL:  , fi - Final Amt, di - Dilute - Reference Dt, ec-Enrich	ed Amt, s1 - Sep1, s		Page 1	ISV - Ir	nsufficient Volum	ne for Analysis		O Cnt; 5 amplePrep v4.8.2

STL RICHLAND	12/18/2 384868 Pacific AnalyI Batch: SEQ Ba
	Work Samp
	1 JJ2NX J6K1801
	2 JJ2PK J6K1801
	3 JJ2PK J6K1801 11/17/20

12/18/2006 12:42:5				reparation/	Analysis	- W. W.	Balance Id:1	120482733
Pacific Northwest Na	nwest National Labo tional Lab		:-99 Prp/SepRC50 :chnetium-99 by L				Pipet #:	
AnalyDueDate: 01/ Batch: 6331340	101/2007	51 CI	JENT: HANFORD	-			Sep1 DT/Tm Tech:	
Batch: 6331340		pCi/L	PΛ	M, Quote: SA	57671		Sep2 DT/Tm Tech:	
SEQ Batch, Test: None							Prep Tech: ,	Rook I
Work Order, Lot,	Total	Initial Aliquot	QC Tracer	Count	Detector			
Sample DateTime	Amt/Unit	Amt/Unit	Prep Date	Time Min	Id	Count On   (24hr) Circ		
1 JJ2NX-1-AD		125.30g,in		60	**************************************			
J6K180149-1-SAMP	1   1   1   1   1   1   1   1   1   1		######################################					
11/17/2006 08:19		AmtRec: 20ML,500M	L,4XLP,4LP #Contain	ners: 7		Scr. A	lpha: 4.62E-03 uCl/Sa 3.3E-01	L Beta: -4.01E-05 uCl/Sa
2 JJ2PK-1-AC	***************************************	125.40g,in						L Deta4.01E-03 00/34
J6K180149-4-SAMP	st t strike ere							
11/17/2006 11:02	Commence of the control of the contr	AmtRec: 20ML,2X50	OML,4XLP #Containe	ers: 6		Sor:	Alpha: 2.73E-04 uCi/Sa	Beta: -6.05E-04 uCi/Sa
3 JJ2PK-1-AE-S		126.80g,in	tcsg1727		······································		, aprila, 2.702 64 80708	Deta0.002-04 00/08
J6K180149-4-MS	P ( 61 ) was we wan		12/06/06,pd 01/10/06,r					
11/17/2006 11:02		AmtRec: 20ML,2X50		C				
4 JJ2TT-1-AC		125.20g,in	OML,4XLP #Containe	ers. o		Scr:	Alpha: 2.73E-04 uCi/Sa	Beta: -6.05E-04 uCi/Sa
J6K180149-6-SAMP		, 20,20 g, 11,						
			R = 2 = 3 = 4 = 5 = 5 = 5 = 7 = 7 = 7 = 4 + 4 + 4 + 4 + 4 = 7 = 7 = 7					~
11/17/2006 13:00 5 JJ2TT-1-AE-X		AmtRec: 20ML,500M	L4XLP #Containen	s: 6		Scr:	Alpha: 4.14E-04 uCi/Sa	Beta: -4.98E-04 uCi/Sa
J6K180149-6-DUP		127.00g,in						
Management of the control of the con	Desired Desire	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~					***************************************	**************************************
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KDFR1AD-IBLK:       TC-99       RDL:1.50E+01       pCi/L       LCL:       UCL:       RPD:         JU2NX1AD-SAMP Calc Info:       Uncert Level (#s): 2       Decay to SaDt: Y       Blk Subt.: N       Sci.Not.: Y       ODRs: B         JU2PK1AE-MS:       Uncert Level (#s): 2       Decay to SaDt: Y       Blk Subt.: N       Sci.Not.: Y       ODRs: B         KDFR1AA-BLK:       Uncert Level (#s): 2       Decay to SaDt: Y       Blk Subt.: N       Sci.Not.: Y       ODRs: B         KDFR1AC-LCS:       Uncert Level (#s): 2       Decay to SaDt: Y       Blk Subt.: N       Sci.Not.: Y       ODRs: B         KDFR1AD-IBLK:       Uncert Level (#s): 2       Decay to SaDt: Y       Blk Subt.: N       Sci.Not.: Y       ODRs: B         Approved By       Date:	Tc-99 RDL:	:1.50E+01								
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Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

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Work Order, Lot, Total Amt Sample Date /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JJ2N2-1-AD		125.50g,in	125.50g	1.1.	(go				1
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2 JJ2N9-1-AE		124.90g,in	124.90g					20tt. 4.	7/E 04 B01/38
J6K180149-3-SAMP									
11/17/2006 09:46	Amti	Rec: 20ML,2X500ML,4	4XLP,4LP #Containers: 8	i		Scr. /	Alpha: 4.87E-03 uCi/Sa 3.3i	F-011 Poto: 4	19E 0E ::0//0a
3 JJ2TP-1-AD		126.10g,in	126.10g				aprid. 4.07 E-03 BO/34 3.3	L-VIL Deta4.	18E-05 uCi/Sa
J6K180149-5-SAMP			-						
11/17/2006 11:48	Amti	Rec: 20ML,2X500ML,L	-P.4LP #Containers: 5		<del></del>	Code	Alabard COFF OR COVO		
4 JJ2VD-1-AE		125.70g,in	125.70g			Sor:	Alpha: 1.69E-03 uCi/Sa	Beta: -4.	54E-04 uCi/Sa
J6K180164-1-SAMP		<b>V</b>							
11/17/2006 13:02	Λ <i>m</i> t6	Rec: 20ML,500ML,2XL	_P #Containers: 4		·			~~~~~~~~~~	
5 JJ2VD-1-AF-X	Antr	124.90g,in	124.90g			Scr:	Alpha: -8.37E-05 uCi/Sa	Beta: -2.	47E-04 uCi/Sa
J6K180164-1-DUP		12 1.009,41	124.00g						•
		***************************************						**************************************	
11/17/2006 13:02	AmtF	Rec: 20ML,500ML,2XL	P #Containers: 4			Scr:	Alpha: -8.37E-05 uCi/Sa	Beta: -2.4	47E-04 uCi/Sa
6 JJ2VN-1-AF J6K180164-2-SAMP		125.30g,in	125.30g						
			*				**************************************	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
11/17/2006 12:00	Amtf	Rec: 20ML,500ML,2XL	.P,4LP #Containers: 5			Scr:	Alpha: -3.39E-04 uCi/Sa	Beta: 5.8	32E-04 uGi/Sa
7 JJ2VN-1-AG-S		127.60g,in	127.60g	tcsg1728	J.				
J6K180164-2-MS			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	12/06/06,pd 01/10/06,r					
11/17/2006 12:00	AmtF	Rec: 20ML,500ML,2XL	.P,4LP #Containers: 5			Scr:	Alpha: -3.39E-04 uCi/Sa	Beta: 5.8	32E-04 uCi/Sa
				,					
STL Richland Key: In - Initial Amt	, fi - Final Amt, d	li - Diluted Amt, s1	- Sep1, s2 - Sep2	Page 1	ISV - In	sufficient Volur	ne for Analysis	\/\	O Cnt: 7
			ct-Cocktailed Added						SamplePrep v4.8.26
)		-							

STL	
RICHLAND	

384 Pac	18/2006 12:5 1868, Pacific I cific Northwest	Northwest Nation	nal Laboratory ,		Sample   9 Prp/SepRC5	065	ration/Ana	lysis		Balance le	d:1120482733 #:	
Ana	alyDueDate:	01/01/2007		51 CLIE	NT: HANFOR	D				Sep1 DT/Tm Tec	h:	
	t <b>ch: 633133</b> 9 D Batch, Test: 1		pCi/L		F	PM, Quo	ote: SA , 576	71		Sep2 DT/Tm Teci	h:	
1		Ţ								Prep Tec	h: ,BockJ	
	ork Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquo Amt/Unit	t Adj Aliq A (Un-Acid		QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1	J2V1-1-AJ			126.00g,in	126.00g			<i>Od.</i>		<u> </u>		L
	180164-3-SAMF							.000				
11/	17/2006 11:05	MONTH CONTROL OF THE	AmtRo	ec: 20ML,500ML,6	SXLP,3X4LP #Con	ntainers: 11			Scr:	Alpha: 6.29E-03 uÇi/Sa	Beta: -7.	41E-04 uCi/Sa
9 J.	I2WH-1-AD			126.40g,in	126.40g	TO THE REAL PROPERTY.			towero			
	180164-4-SAMF		AmtRo		.P,2X4LP #Conta	ologo: E					***************************************	
10 JJ	2WR-1-AG		Aniu ii	125.90g,in	125.90g	amers: 5			Ser:	Alpha: -8.67E-04 uCi/Sa	Beta: 7.3	7E-04 uCi/Sa
	180164-5 <b>-</b> SAMF			120.309,111	125.90g							
	7/2006 07:00	BARRETTO SE	AmtRe	ec: 20ML,500ML,2	XLP,3X4LP #Con	tainers: 7	**************************************		Scr:	Alpha: 2.30E-03 uCi/Sa	Reta: -1:	
11 ]]	2W4-1-AG			125.50g,in	125.50g	······	777200				Dott. 1.7	oc os doroa
1	180164-6-SAMF		AD						******		·	
	2XD-1-AJ		AmtHe		XLP,3X4LP #Con	tainers: 7			Scr:	Alpha: 2.27E-03 uCi/Sa	Beta: -2.4	9E-03 uCi/Sa
1	2 <b>AD-1-AU</b> 180164-7-SAMF			125.80g,in	125.80g							
1	7/2006 10:14		AmtRe	ec: 20ML 500ML 6	XLP,3X4LP #Con	tainers: 11			Scr:	Alabar 2 275 00050		
13 JK	DFL-1-AA-B			125.40g,in	125.40g				OUI.	Alpha: 3.37E-03 uCi/Sa	bela: -4,2	4E-03 uCi/Sa
	270000-339-BLF	-				<b>**</b>			***************************************			
	7/2006 13:02		AmtRe		#Containers: 1				Ser:	Alpha:		Beta:
J6K2	(DFL-1-AC-C 270000-339-LC 			124.80g,in	124.80g	************	tcse2040 12/06/06,pd 01/10/06,r	4	~~~~~			
11/1	7/2006 13:02		AmtRe	ec:	#Containers: 1				Scr:	Alpha:		Beta:
					an Milhau							
	TL Richland chland Wa.		mt, fi - Final Amt, di , r - Reference Dt, ec-f				age 2	ISV - In	nsufficient Volum	ne for Analysis		O Cnt: <b>14</b> amplePrep v4.8.2
ω ω												1

12/18/2006 12:56:06 PM			Sar	nple Prep	aration	/Analys	is:		Dalaaa	. 1.1	
		FI	P Tc-99 Prp/9			.,,,,,,,	.,0		Balanc		
			5 Technetiun		d Scint				Pi	oet #:	
AnalyDueDate: 01/01/2007	×.	5	SI CLIENT: HA	ANFORD					Sep1 DT/Tm T	ech:	
Batch: 6331339 SEQ Batch, Test: None	pCi/L	•							Sep2 DT/Tm T	ech:	
j  									Prep 1	Tech:	
Work Order, Lot, Total Amt Sample Date /Unit	Total Acidified/Uni	Initial t An		Adj Aliq Amt (Un-Acidified)	QC Trad		Count ime Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 JKDFL-1-AD-BN						<del></del>					
J6K270000-339-IBLK											
11/17/2006 13:02	***************************************	AmtRec:	#Contair	ers: 1	********		***********	Ser:	Alpha:		Beta:
16 JKDFL-1-AE-BN									7.19-154		Dela.
J6K270000-339-IBLK											
11/17/2006 13:02		AmtRec:	#Contair	ers: 1			********	Scr:	Alpha:	***************************************	Data
Comments: VH < 2.0	50.12.18							001.	Alpha.	Value of the second	Beta:
All Clients for Batch:											
384868, Pacific Northwes	t National Lab	oratory	Pacific	Northwest N	Wational 1	Lab, SA	, 5767	1			
JJ2N21AD-SAMP Constituent Li Tc-99 RDL:15 JJ2VN1AG-MS:		L:70	UCL:130	RPD:20					***************************************		-
JRDFL1AA-BLK: Tc-99 RDL:15 JRDFL1AC-LCS:	pCi/L LC	L:	UCL:	RPD:							
Tc-99 RDL:15	pci/L Lo	L:70	UCL:130	RPD:20							
JKDFL1AD-IBLK: Tc-99 RDL:15 JKDFL1AE-IBLK:	pCi/L LC	L:	UCL:	RPD:							
Tc-99 RDL:15	pCi/L LC	L:	UCL:	RPD:							
JJ2N21AD-SAMP Calc Info: Uncert Level (#s).: 2 JJ2VN1AG-MS:	Decay to Sa	Dt: Y	Blk Subt.:	N Sci.N	lot.: Y	ODRs:	В				
Uncert Level (#s).: 2	Decay to Sa	Dt: Y	Blk Subt.:	N Sci.N	lot.: Y	ODRs:	В				
Uncert Level (#s).: 2	Decay to Sa	Dt: Y	Blk Subt.:	N Sci.N	Jot.: Y	ODRs:	В				
JKDFL1AC-LCS: Uncert Level (#s).: 2	Decay to Sa	Dt: Y	Blk Subt.:		ot.: Y	ODRs:					
STL Richland Key: In - Initial A	ımt, fi - Final Am	t, di - Dilute	đ Amt, s1 - Sep	1, s2 - Sep2	Page 3		ISV -	Insufficient Volum	e for Analysis		WO Cnt: 16
Richland Wa. pd - Prep D	t, r - Reference Dt	, ec-Enrichm	nent Cell, ct-Cod	cktailed Added					•		_SamplePrep v4.8.26

11/27/2006 1:26:28 PM 384868, Pacific Northwest National Laboratory Pacific Northwest National Lab		Liquid Scint	on/Analysis			12445
Pacific Northwest National Lab  AnalyDueDate: 01/01/2007  Batch: 6331331 WATER pCi  SEQ Batch, Test: None	Vo	PM, Quote: S	SA, 57671	apadeture o produce	Sep2 DT/Tm Tech:	7-14-0000
Work Order, Lot, Sample DateTime Amt/Unit		C Tracer Count Properties Count Properti	Detector n Id	Count On   O (24hr) Circle		Comments:
1 JJ2NX-1-AA J6K180149-1-SAMP						11
11/17/2006 08:19 2 JJ2N2-1-AA	AmtRec: 20ML,500ML,4XLP,4LF	Containers: 7		Scr:	Alpha:	Beta:
J6K180149-2-SAMP 11/17/2006 08:58	AmtRec: 20ML,2X500ML,LP,4LF	P #Containers: 5		Scr:	Alpha;	Beta:
3 JJ2N9-1-AA J6K180149-3-SAMP						
11/17/2006 09:46 4 JJ2PK-1-AA J6K180149-4-SAMP	AmtRec: 20ML,2X500ML,4XLP,4	4LP #Containers: 8		Scr:	Alpha:	Beta:
11/17/2006 11:02 5 JJ2TP-1-AA	AmtRec: 20ML,2X500ML,4XLP	#Containers: 6		Scr:	Alpha:	Beta:
J6K180149-5-SAMP	AND AND AVERABLE AT A					
6 JJ2TT-1-AA J6K180149-6-SAMP	AmtRec: 20ML,2X500ML,LP,4LF	P #Containers: 5		Scr:	Alpha:	Beta:
11/17/2006 13:00 7 JJ2VD-1-AA	AmtRec: 20ML,500ML4XLP	#Containers: 6		Scr:	Alpha:	Beta:
J6K180164-1-SAMP 11/17/2006 13:02	AmtRec: 20ML,500ML,2XLP	#Containers: 4		Scr:	Alpha:	Beta;
STL Richland Key: In - Initial Amt, fi - Final A Richland Wa. pd - Prep Dt, r - Reference	ımt, di - Diluted Amt, s1 - Sej Dt, ec-Enrichment Cell, ct-Co		IS	/ - Insufficient Volume	for Analysis	WO Cnt: 7 ICOC v4.8.2

11/27/2006 1:26:28 384868, Pacific North		horatan		reparation/A	nalysis	-	Balance Id: 12	445
Pacific Northwest Nati	onal Lab	* .	3 Prp/SepRC5007 itium by Liquid S				Pipet #:	
nalyDueDate: 01/0	1/2007		IENT: HANFORD			Ser	Balance Id: /2 Pipet #: p1 DT/Tm Tech: /2	111-000m
AnalyDueDate: 01/0 Batch: 6331331 SEQ Batch, Test: None	WATER	pCi/L	PI	W, Quote: SA , 5	7671		o2 DT/Tm Tech:	, , , , , , , , , , , , , , , , , , , ,
SEQ Batch, Test: None		•		,,	. •	3et		
Work Order, Lot,	Total						Prep Tech:	
Sample DateTime	Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
JJ2VN-1-AA				-1		1		
5K180164-2-SAMP	16 M WENT OF 15							
	Market Ma	_		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	****			
1/17/2006 12:00		AmtRec: 20ML,500M	L,2XLP,4LP #Contail	ners: 5		Scr:	Alpha:	Beta:
• <b>JJ2V1-1-AA</b> 6K180164-3-SAMP								
21C 100 104-0-0 WINTER		***************************************						
1/17/2006 11:05		AmtRec: 20ML,500M	_,6XLP,3X4LP #Conta	ainers: 11		Scr:	Alpha:	Beta:
JJ2WH-1-AA							Alpha.	Deta.
6K180164-4-SAMP								
12/20/20/20/20/20/20/20/20/20/20/20/20/20							**************************************	
1/17/2006 09:35		AmtRec; 20ML,500Ml	_,LP,2X4LP #Contair	ners: 5		Scr:	Alpha:	Beta:
I <b>JJ2WR-1-AA</b> 5K180164-5-SAMP								
				****		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
11 12 12 13 14 15 15 16 17 16 17 17 17 17 17 17 17 17 17 17 17 17 17		AmtRec: 20ML,500Mi	_,2XLP,3X4LP #Conta	iners: 7		Scr:	Alpha:	Data
JJ2W4-1-AA							Alpha.	Beta:
5K180164-6-SAMP								
	A CONTRACTOR OF THE CONTRACTOR	70 VA 48 2 W T T T T W W						7 7 7 7 5 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1/17/2006 08:31	***************************************	AmtRec: 20ML,500MI	_,2XLP,3X4LP #Conta	iners: 7		Scr.	Alpha:	Beta:
JJ2XD-1-AA								
6K180164-7-SAMP {      <b>                              </b>	# 8( ## Bit							
1/17/2006 10:14		AmtPac: 20Mil E00Mil	_,6XLP,3X4LP #Conta	inoro: 11		0		_
JJ620-1-AA		Aminec, Zolvic, Societi	-,0XLF,3X4LF #COMa	iners. 11	<del></del>	Scr:	Alpha:	Beta:
6K210263-1-SAMP								
comments of the control of the contr				***************************************				
1/20/2006 11:03		AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
STL Richland Key:	In - Initial Amt. fi	- Final Amt, di - Diluted Am	: s1 - Sen1 - s2 - Se	p2 Page 2	16/ 1	nsufficient Volume for Ar	navie	WO Cnt: 14
		eference Dt, ec-Enrichment (			107 - 1	nounicient volume for Al	iaiyələ	ICOC v4.

11/27/2006 1:26:28 PM	-	Sample Pr	eparation/A	nalvsis	-	Ralance Id:	101111
384868, Pacific Northwest National I Pacific Northwest National Lab		Prp/SepRC5007 tium by Liquid Sci				Balance Id: - Pipet #: _	
AnalyDueDate: 01/01/2007		IENT: HANFORD	111		s	ep1 DT/Tm Tech:	12-14-060m
Batch: 6331331 WATER SEQ Batch, Test: None	pCi/L	PM,	, Quote: SA , 5	7671	<del></del>	ep2 DT/Tm Tech:	
3						Prep Tech:	
Work Order, Lot, Sample DateTime Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analys Init/Date	
15 JJ620-1-AC-X J6K210263-1-DUP							
11/20/2006 11:03	AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
16 JJ623-1-AA							
J6K210263-2-SAMP 11/20/2006 11:49	AmtRec: 20ML,LP	#Containers: 2			Scr:	 Alpha:	Beta:
17JJ626-1-AA							
J6K210263-3-SAMP 11/20/2006 10:15	AmtRec: 20ML,LP	#Containers: 2			Scr:	Alpha:	Beta:
18JKDE3-1-AA-B						,p.1.04	Oca.
J6K270000-331-BLK							
11/20/2006 11:03	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
19 JKDE3-1-AC-C J6K270000-331-LCS							
11/20/2006 11:03	AmtRec:	#Containers: 1		**************************************	 Scr:	Alpha:	Beta:
20 JKDE3-1-AD-BX							
J6K270000-331-MBLK 11/20/2006 11:03	AmtRec:	#Containers: 1			Scr:	Aipha:	Beta:
21 JKDE3-1-AE-CM J6K270000-331-MLCS							
11/20/2006 11:03	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
	fi - Final Amt, di - Diluted Amt - Reference Dt, ec-Enrichment C			ISV	- Insufficient Volume for	Analysis	WO Cnt; <b>21</b> ICOC v4.8.24

11/27/2006 1:26:29 PM			Sa	mple Pr	eparation//	Analysis	-	Balance Id:	1741215 .
analyDueDate: 01/01/2007 Batch: 6331331 EQ Batch, Test: None	,		AR H-3 Prp/Se S6 Tritium by 51 CLIENT: H	Liquid Sci	nt	Balance Id: 1211215 · Pipet #: Sep1 DT/Tm Tech: 12-111. Down			
Satch: 6331331	***************************************	pCi/L						Sep2 DT/Tm Tech:	
Datell, Test. None				1153				Prep Tech:	
	Total mt/Unit	Initial Aliqi Amt/Unit		C Tracer ep Date	Count Time Min	Detector Id	Count On   Or (24hr) Circle	f CR Analyst,	Comments:
2JKDE3-1-AF-BN						II T	1 (2111) 0/1010	1 110000	
6K270000-331-IBLK									
1/20/2006 11:03	**************************************	AmtRec:	#Conta	iners: 1	*	7744764448888887778844	Scr:	Alpha:	Beta:
JKDE3-1-AG-BN					<u> </u>				
6K270000-331-IBLK	<b></b>								
1/20/2006 11:03		AmtRec:	#Conta	iners: 1			Scr:	Alpha:	Beta:
JKDE3-1-AH-BN	4								
6K270000-331-IBLK 	~~				·	******			
1/20/2006 11:03		AmtRec:	#Conta	iners: 1			Scr:	Alpha:	Beta:
Comments:			****************		***************************************				
1 Clients for Batch:									
384868, Pacific Northw		1 Laboratory	Pacific	c Northwes	t National La	15, SA, 57	671		
J2NX1AA-SAMP Constituent H-3 RDL:400	List: pCi/L	LCL:70	UCL:130	RPD:20					
DE31AA-BLK: H-3 RDL:400	pCi/L	LCL:	UCL:	RPD:					
DE31AC-LCS:									
DE31AD-MBLK:	pCi/L	LCL:70	UCL:130	RPD:20					
H-3 RDL:400 DE31AE-MLCS:	pCi/L	LCL:	UCL:	RPD:					
H-3 RDL:400 DE31AF-IBLK:	pCi/L	LCL:70	UCL:130	RPD:20					
H-3 RDL:400	pCi/L	LCL:	UCL:	RPD:					
DE31AG-IBLK: H-3 RDL:400	pCi/L	LCL:	UCL:	RPD:					
STL Richland Key: In - Initi	alΔmt fi Fir	nal Amt. di - Dilu	tod Amt s1 - So	n1 s2 - San	2 Page 4	IQ	SV - Insufficient Volume	for Analysis	WO Cnt: <b>24</b>
,	*	nce Dt, ec-Enric				10	v - maunicient volunte	ioi Arialysis	ICOC v4.

-	11/27	7/2006	1:26:30	PM
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### Sample Preparation/Analysis

Balance Id:

ance Id: 124115

Pipet #: \_\_\_\_\_\_\_

Tm Tech: 12-14-Court

AR H-3 Prp/SepRC5007 S6 Tritium by Liquid Scint

RI AnalyDueDate: 01/01/2007

Batch: 6331331

SEQ Batch, Test: None

5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

pCi/L

Prep Tech:

				-				1					
Work Order, Sample Date			Fotal nt∕Unit			Aliquot VUnit	11	C Tracer ep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
KDE31AH-IBLE													
H-3	RDL:400	)	pCi/L	L	CL:	ūCI	.:	RPD:					
JJ2NX1AA-SAME	Calc In	ifo:											
Uncert I		3).: 2	Decay	to S	SaDt:	Y Bli	subt.	: N	Sci.Not.: Y	ODRs: B			
TKDE31AA-BLK:													
Uncert I		3).: 2	Decay	to S	SaDt:	Y B13	Subt.	: N	Sci.Not.: Y	ODRs: B			
KDE31AC-LCS: Uncert I			70		7- 24	v							
KDE31AD-MBLF		5).: 2	Decay	to S	saut:	X BT	Subt.	: N	Sci.Not.: Y	ODRs: B			
Uncert I		3).: 2	Decay	to S	SaDt:	Y BII	Subt.	- NT	Sci.Not.: Y	ODRs: B			
KDE31AE-MLCS									SCI-MOL.I I	ODRS: B			
Uncert I		3).: 2	Decay	to S	SaDt:	Y B11	subt.	: N	Sci.Not.: Y	ODRs: B			
KDE31AF-IBLE													
Uncert I		3).: 2	Decay	to S	SaDt:	Y Bli	Subt.	: N	Sci.Not.: Y	ODRs: B			
KDE31AG-IBLE													
Uncert I KDE3lAH-IBLK	-	3).: 2	Decay	to S	BaDt:	Y B13	Subt.	: N	Sci.Not.: Y	ODRs: B			
Uncert I			Decay	+0.0	7-D+ -	v 931	- 0	. 37	a_i				
0110610 1	MACT / ME	*,	necey	LU S	apt:	1 811	Subt.	: N	Sci.Not.: Y	ODRs: B			
									App	roved By		Date: _	

STL Richland Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 24 ICOC v4.8.24

12/19/2006 2:04 384868, Pacific N Pacific Northwest	lorthwest Nation National Lab		S4 Nick	Sample Prep 3 PrpRC5016, SepR el by ICP and Nicke	C5069	Balance ld:1120482733  Pipet #:				
AnalyDueDate:		205048	51 CLIE	NT: HANFORD				Sep1 DT/Tm Tec	h:	
Batch: 6331338 SEQ Batch, Test: N		pCi/L		PM, Q	uote: SA , 576	71		Sep2 DT/Tm Tecl	n:	
oma Datori, 10gt. I	OHO			5 i B 22 i 1 a		. 4 2 to as for v 1 1 to 100 f 1		Prep Tec	h: .BockJ	
Work Order, Lot,	Total Amt	Total	Initial Aliquot		QC Tracer	Count	Detector	Count On Off	CR Analyst,	Commente
Sample Date	/Unit	Acidified/Unit	Amt/Unit	(Un-Acidified)	Prep Date	Time Min	ld	(24hr) Circle	Init/Date	Comments:
1 JJ2V1-1-AG	· · · · · · · · · · · · · · · · · · ·		401.50g,in	401.50g	NITA2336	100				
16K180164-3-SAMP					12/19/06	, 0				
11/17/2006 11:05		AmtF	tec: 20ML,500ML,6	XLP,3X4LP #Containers:	11		Sor:	Alpha: 6.29E-03 uCi/Sa	Beta: -7.	41E-04 uCi/Sa
2 JJ2V1-1-AK-X		A STATE OF THE STA	399.20g,in	399.20g	NITA2337		·			
J6K180164-3-DUP	8 511 B IV 8 5 1 1 5 D 1 1				12/19/06					
11/17/2006 11:05		AmtF	lec: 20ML,500ML,6	XLP,3X4LP #Containers:	11		Sor:	Alpha: 6.29E-03 uCVSa	Beta: -7.4	41E-04 uCi/Sa
3 JJ2XD-1-AG			400.60g,in	400.60g	NITA2338		-1,4			
J6K180164-7-SAMP					12/19/06					
11/17/2006 10:14	Account of the control of the contro	AmtF	ec: 20ML,500ML,6	XLP,3X4LP #Containers:	11		Scr:	Alpha: 3.37E-03 uCi/Sa	Beta: -4.2	24E-03 uCi/Sa
4 JKDFH-1-AA-B			399.90g,in	399. <b>90</b> g	NITA2339					
16K270000-338-BLK					12/19/06					
11/17/2006 11:05		AmtR	ec:	#Containers: 1			Scr:	Alpha:		Bela:
5 JKDFH-1-AC-C			400.90g,in	400.90g	NISA0742					
J6K270000-338-LCS					12/19/06					
11/17/2006 11:05	MATERIAL STATES	AmtF	ec:	#Containers: 1			Scr:	Alpha:		Beta:
6 JKDFH-1-AD-BN						de				
J6K270000-338-IBL						*********	<b>## \$ 1.55 - 1.5</b> - 1.5			
11/17/2006 11:05	o v 12   MAI2 012	AmtF	ec:	#Containers: 1			Scr;	Alpha:		Beta:
STL Richland	Key: In - Initial Ar	mt, fi - Final Amt, d	- Diluted Amt, s	s1 - Sep1, s2 - Sep2	Page 1	ISV - In	sufficient Volum	ne for Analysis	W	O Cnt; 6

Prep\_SamplePrep v4.8.26

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Richland Wa.

12/19/2006 2:04	4:59 PM			Sar	nple Pre	paration	n/Analy	sis		Balance	ld:	***************************************
1				AA Ni-63 PrpR			lauda Cet	••		Pipe	et #:	
AnalyDueDate:	01/01/2007			S4 Nickel by IC		Kel-63 by Li	iquia Sci	π		Sep1 DT/Tm Te	ch:	
Batch: 633133		рС	i/L	· · · · · · · · · · · · · · · · · · ·						Sep2 DT/Tm Te		
SEQ Batch, Test:		,,,,	~~							•		
										Prep Te		
Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/U			idj Aliq Amt Un-Acidified	) QC Tra		Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Comments:	8 H CZ-0 S	78 iz-10	(- OY									
All Clients for 384868, Pac	Batch: :ific Northwest	: National I	Laboratory	y Pacific	Northwest	: National	Lab, S	A , 57671		Andrea Company of the		
JJ2V11AG-SAMP O Ni-63 F	Constituent Lis	st: pCi/L	LCL:70	UCL:130	RPD:20						. 1010	
JKDFH1AA-BLK: Ni-63 F JKDFH1AC-LCS:	RDL:15	pCi/L	LCL:	UCL:	RPD:							
Ni-63 F JKDFH1AD-IBLK:	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20							
Ni-63 F JJ2V11AG-SAMP C	DL:15	pCi/L	LCL:	UCL:	RPD:							
JKDFH1AA-BLK:	rel (#s).: 2	Decay to		Blk Subt.:		.Not.: Y	ODRs					
DKDFH1AC-LCS:	rel (#s).: 2	Decay to		Blk Subt.:		i.Not.: Y	ODRs					
JKDFH1AD-IBLK:	rel (#s).: 2	Decay to		Blk Subt.:		i.Not.: Y	ODRs					
Should be	, u. ( m 3 ) Z	Decay to	Sabe. 1	BIR BUBE!!	. 50.							
						Ap	proved B	Υ			Date:	
						•						
								~				
STL Richland Richland Wa.	-			luted Amt, s1 - Sep chment Cell, ct-Co		_		ISV -	Insufficient Volun	ne for Analysis		WO Cnt: 6 SamplePrep v4.8.26

מ	12/19/2006 7:18:51	I AM		Sample I	Preparation	/Analysis			
Ï	1		oratory <b>DH III</b>	Vat_Laser PrpRC		Allalysis		Balance Id:11204	82733
Z	Pacific Northwest Na	itional Lab	• '	otal Uranium by F				Pipet #:	
ΠC	AnalyDueDate: 01	/01/2007 \ \ \		LIENT: HANFORD			s	ep1 DT/Tm Tech:	
HI.	Batch: 6331335	WATER	ua/L	P	M, Quote: SA	, 57671		ep2 DT/Tm Tech:	
AND	SEQ Batch, Test: Non-	e All Tests: 63313	31 ARS6, 6331335 DHSS	,6331339 FPS5,63	331340 AMS5, 63	31348 AWTA, 6331	1351 CLTL,		
Ü	1/4		TI II					Prep Tech: ,Bock	(J
	Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
	1 JJ2NX-1-AE		25.30g,in						
	J6K180149-1-SAMP	) : P: : # 14 001#							
	11/17/2006 08:19		AmtRec: 20ML,500M	IL,4XLP,4LP #Conta	iners: 7		Scr: Alpha:	1.62E-03 uCi/Sa 3.3E-01L	Beta: -4.01E-05 uCi/Sa
	2 JJ2NX-1-AF-X		25.00g,in					3.32.072	Joan 4.01L to devod
	J6K180149-1-DUP								
					****************			************	
	11/17/2006 08:19		AmtRec: 20ML,500M	L,4XLP,4LP #Conta	iners: 7		Scr: Alpha: 4	.62E-03 uCi/Sa 3.3E-01L	Beta: -4.01E-05 uCi/Sa
	3 JJ2N2-1-AE J6K180149-2-SAMP		25.60g,in						
	Management of the party of the	2000 M			**************************************				
	11/17/2006 08:58	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	AmtRec: 20ML,2X50	OML,LP,4LP #Conta	iners: 5		Scr: Alp	ha: 1,51E-03 uCi/Sa	Beta: 4.67E-04 uCi/Sa
	4 JJ2N2-1-AF-S		25.40g,in	UNSF3489					
	J6K180149-2-MS	· 1116日		12/14/06,pd 03/22/05,r					
	11/17/2006 08:58		4						
2	5 JJ2N9-1-AF	***************************************	AmtRec: 20ML,2X50i 25.50g,in	OML,LP,4LP #Conta	ners: 5		Scr: Alp	ha: 1.51E-03 uCi/Sa	Beta: 4.67E-04 uCi/Sa
Ŷ	J6K180149-3-SAMP		25.509,111						
A	PARTIES DE LA CONTRACTOR DE LA CONTRACTO				*****		*		
1.50	11/17/2006 09:46	1 1 1 1 2 2 2 (   4 2 2 1 3	AmtRec: 20ML,2X50	OML,4XLP,4LP #Cont	ainers: 8		Scr: Alpha: 4	.87E-03 uCVSa 3.3E-01L	Beta: -4.18E-05 uCi/Sa
	6 JJ2PK-1-AD		25.70g,in						
	J6K180149-4-SAMP	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
	11/17/2006 11:02	MANAGEMENT STATES OF THE STATE	AmtRec: 20ML,2X50	OML,4XLP #Contain	ners: 6		Scr: Alb	ha: 2.73E-04 uCi/Sa	Beta: -6.05E-04 uCi/Sa
	7⊋JJ2TP-1-AE		25.70g,in		· · · · · · · · · · · · · · · · · · ·				John Close of Gold
2	J6K180149-5-SAMP	FIXI b Driv men							
	20000000000000000000000000000000000000	Manager of the state of the sta			**************************************				
	11/17/2006 11:48		AmtRec: 20ML,2X50	OML,LP,4LP #Contai	ners: 5		Scr: Alp	ha: 1.69E-03 uCi/Sa	Beta: -4.54E-04 uCi/Sa
	STL Richland Ke	y: In - Initial Amt, fi	- Final Amt, di - Diluted Am	nt, s1 - Sep1, s2 - Se	pp2 Page 1	ISV -	Insufficient Volume for	Analysis	WO Cnt: 7
<u> </u>	Richland Wa.		ference Dt, ec-Enrichment				-	<b>,</b>	Prep_SamplePrep v4.8.26
1								<del></del>	

STL	
RICHLAND	
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12/19/2006 7:18:54 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory, DH UNat Laser PrpRC5015 Pipet #: Pacific Northwest National Lab SS Total Uranium by KPA 51 CLIENT: HANFORD AnalyDueDate: 01/01/2007 Sep1 DT/Tm Tech: Batch: 6331335 WATER ua/L PM, Quote: SA, 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,BockJ Work Order, Lot, Total Initial Aliquot QC Tracer Count Detector Count On | Off CR Analyst, Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Time Min ld (24hr) Circle Init/Date 8 JJ2TT-1-AD 25.60g,in J6K180149-6-SAMP AmtRec: 20ML.500ML4XLP #Containers: 6 Scr: Alpha: 4.14E-04 uCi/Sa Beta: -4.98E-04 uCi/Sa 9 JJ6KT-1-AA 25.60q,in J6K210219-2-SAMP 11/20/2006 10:29 AmtRec: 20ML.500MLP #Containers: 2 Scr: Alpha: 2.73E-11 uCi/Sa Beta: -2.50E-11 uCi/Sa 10 JJ6K2-1-AA 25.30q,in J6K210219-3-SAMP 11/20/2006 09:42 AmtRec: 20ML,500MLP #Containers: 2 Scr: Alpha: 3.66E-11 uCi/Sa Beta: 3.38E-11 uCi/Sa 11 JJ6K8-1-AA 26.00g,in J6K210219-4-SAMP 11/20/2006 09:04 AmtRec: 20ML.500MLP #Containers: 2 Scr: Alpha: 4.74E-11 uCi/Sa Beta: -8.40E-11 uCi/Sa 12 JKDE8-1-AA-B 26.30g,in J6K270000-335-BLK 11/17/2006 08:19 AmtRec: #Containers: 1 Scr: Alpha: Beta: 13 JKDE8-1-AC-C 25.50q.in UNSF3490 12/14/06.pd J6K270000-335-LCS 03/22/05,r 11/17/2006 08:19 AmtRec: #Containers: 1 Scr: Alpha: Beta: 14 JKDE8-1-AD-C 25.20g,in **UNSC1434** 12/05/06,pd J6K270000-335-LCS 04/28/06,r 11/17/2006 08:19 AmtRec: #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 WO Cnt: 14 Page 2 ISV - Insufficient Volume for Analysis Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep\_SamplePrep v4.8.26

,	12/19/2006 7:18:56	AM
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#### Sample Preparation/Analysis

DH UNat\_Laser PrpRC5015

Balance	ld:1120482733
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Pipet #:

AnalyDueDate: 01/01/2007

SS Total Uranium by KPA 5I CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 6331335 SEQ Batch, Test: None ug/L

Sep2 DT/Tm Tech:

Prep Tech: ,BockJ Work Order, Lot, Total Initial Aliquot QC Tracer Count On | Off Count Detector CR Analyst, Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Time Min ld (24hr) Circle Init/Date

Comments: 74 LZ-0 96 12-19-06

All Clients	for Batch:					
i .	Pacific Northwes	t National	Laboratory	Pacific	Northwest National	Lab, SA, 57671
~~~~						
	MP Constituent Li	.st:				
Uranium	RDL:1.44E-01	ug/L	LCL:	UCL:	RPD:	
JJ2N21AF-MS	5 :					
JKDE81AA-BL	.K:					
Uranium	RDL:1.44E-01	ug/L	LCL:	UCL:	RPD:	
JKDE81AC-LC	S:	~.				
Uranium	RDL:0.144343	ug/L	LCL:70	UCL:130	RPD:20	
JKDE81AD-LC	S:	_				
Uranium	RDL:0.144343	ug/L	LCL:70	UCL:130	RPD:20	
JJ2NX1AE-SA	MP Calc Info:					
Uncert	Level (#s).: 2	Decay f	to SaDt: Y	Blk Subt.:	N Sci.Not.: Y	ODRs: B
JJ2N21AF-MS	5:	-				52.02. 2
Uncert	Level (#s),: 2	Decay 1	to SaDt: Y	Blk Subt.:	N Sci.Not.: Y	ODRs: B
JKDE81AA-BL	K:					
Uncert	Level (#s).: 2	Decay (	to SaDt: Y	Blk Subt.:	N Sci.Not.: Y	ODRs: B
JKDE81AC-LC	es:					
Uncert	Level (#s).: 2	Decay 1	to SaDt: Y	Blk Subt.:	N Sci.Not.: Y	ODRs: B
JKDE81 <b>A</b> D-LC	S:					
Uncert	Level (#s).: 2	Decay t	to SaDt: Y	Blk Subt.:	N Sci.Not.: Y	ODRs: B

Page 3

Approved By \_

STL Richland Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added ISV - Insufficient Volume for Analysis

WO Cnt: 14 Prep\_SamplePrep v4.8.26 1/2/2007 10:42:48 AM

# ICOC Fraction Transfer/Status Report ByDate: 1/2/2006, 1/7/2007, Batch: '6331345', User: 'ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us A	ccepting		Comments
6331345		Company of the Compan		mi (Alogan-squessann nooccus anna pool a santa anna chomh lide le le gear ann an ann an ag an an an an an an a	
AC	CalcC	BockJ	12/19/2006 1:1	1:53	
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24
SC		BockJ	Prep1C	12/19/2006 1:11:53 PM	RICH-RC-5014 REVISION 6
SC		AshworthA	InPrep2	12/27/2006 6:40:59 AM	RICH-RC-5014 REVISION 6
SC		AshworthA	Prep2C	12/29/2006 2:07:11 PM	RICH-RC-5014 REVISION 6
SC		DAWKINSO	InCnt1	12/29/2006 2:36:31 PM	RICH-RD-0003 REVISION 4
SC .		DAWKINSO	CalcC	12/29/2006 7:33:38 PM	RICH-RD-0003 REVISION 4
IC		AshworthA	12/27/2006 6:40	0:59	
1C		AshworthA	12/29/2006 2:0	7:11	
4 <i>C</i>		DAWKINSO	12/29/2006 2:30	6:31	
AC		DAWKINSO	12/29/2006 7:3	3:38	

AU: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

1/9/2007 4:40:28 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/9/2006, 1/14/2007, Batch: '7003498', User: \*ALL Order By DateTimeAccepting

2 Batch Worl	k Ord CurStat	tus A	ccepting		Comments
7003498	· VOCAMENTAL CONTROL OF THE CONTROL			***************************************	No. of State
4 <i>C</i>	CalcC	BockJ	1/4/2007 1:50:2	26 PM	
SC		andersonp	IsBatched	1/3/2007 3:12:25 PM	ICOC_RADCALC v4.8.26
C		BockJ	Prep1C	1/4/2007 1:50:26 PM	RICH-RC-5014 REVISION 6
C		AshworthA	InPrep2	1/5/2007 8:40:36 AM	RICH-RC-5014 REVISION 6
C		AshworthA	Prep2C	1/9/2007 11:29:18 AM	RICH-RC-5014 REVISION 6
9		BlackCL	InCnt1	1/9/2007 11:34:11 AM	RICH-RD-0003 REVISION 4
		BlackCL	CalcC	1/9/2007 2:17:22 PM	RICH-RD-0003 REVISION 4
2		BockJ	1/4/2007 1:50:3	3 PM	
9		AshworthA	1/5/2007 8:40:3	6 AM	
<b>σ</b>		AshworthA	1/9/2007 11:29:	18	
C		BlackCL	1/9/2007 11:34:	11	
C		BlackCL	1/9/2007 2:17:2	2 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

1/9/2007 4:41:03 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/9/2006, 1/14/2007, Batch: '6331346', User: \*ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	tus A	ccepting		Comments
6331346					
4 <i>C</i>	CalcC	BockJ	12/19/2006 12:	59:40	
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24
SC		BockJ	Prep1C	12/19/2006 12:59:40 PM	RICH-RC-5014 REVISION 6
ș <i>C</i>		AshworthA	InPrep2	12/27/2006 6:41:08 AM	RICH-RC-5014 REVISION 6
SC .		AshworthA	Prep2C	12/29/2006 2:07:18 PM	RICH-RC-5014 REVISION 6
SC .		DAWKINSO	InCnt1	12/29/2006 2:36:23 PM	RICH-RD-0003 REVISION 4
SC		DAWKINSO	CalcC	12/29/2006 6:49:27 PM	RICH-RD-0003 REVISION 4
SC .		BlackCL	InCnt1	1/2/2007 8:38:16 AM	RICH-RD-0003 REVISION 4
C		DAWKINSO	CalcC	1/2/2007 4:47:35 PM	RICH-RD-0003 REVISION 4
C		AshworthA	12/27/2006 6:4	1:08	
С		AshworthA	12/29/2006 2:0	7:18	
IC		DAWKINSO	12/29/2006 2:30	5:23	
AC		DAWKINSO	12/29/2006 6:49	9:27	
1 <i>C</i>		BlackCL	1/2/2007 8:38:1	6 AM	
4 <i>C</i>		DAWKINSO	1/2/2007 4:47:3	5 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Page 1

Grp Rec Cnt:7 ICOCFractions v4.8.26 1/2/2007 10:47:04 AM

# ICOC Fraction Transfer/Status Report ByDate: 1/2/2006, 1/7/2007, Batch: '6331351', User: \*ALL Order By DateTimeAccepting

Q Batch Work Ord CurStatus Ac			ccepting		Comments
6331351		**************************************			
4 <i>C</i>	CalcC	BockJ	12/18/2006 1:1	0:35	
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24
SC .		BockJ	InPrep	12/18/2006 1:10:35 PM	RICH-RC-5016 Revision 6
SC		BockJ	Prep1C	12/18/2006 1:25:59 PM	RICH-RC-5016 REVISION 6
SC .		ManisD	Sep1C	12/19/2006 3:31:58 PM	RICH-RC-5006 REV 6
SC		DAWKINSO	InCnt1	12/19/2006 3:37:35 PM	RICH-RD-0007 REVISION 5
SC .		StringerR	Cnt1C	12/20/2006 7:15:17 AM	RICH-RD-0007 REVISION 5
SC .		FABREM	Sep2C	12/29/2006 6:20:36 PM	RICH-RC-5071 REVISION 4
SC .		DAWKINSO	InCnt2	12/29/2006 6:37:13 PM	RICH-RD-0003 REVISION 4
SC .		StringerR	CalcC	12/31/2006 11:31:13 AM	RICH-RD-0003 REVISION 4
C		BockJ	12/18/2006 1:2	25:59	
C		ManisD	12/19/2006 3:3	:1:58	
IC		DAWKINSO	12/19/2006 3:3	77:35	
IC .		StringerR	12/20/2006 7:1	5:17	
C		FABREM	12/29/2006 6:2	20:36	
IC		DAWKINSO	12/29/2006 6:3	7:13	
lC		StringerR	12/31/2006 11:	31:13	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

STL RICHLAND

12/27/2006 2:16:20 PM

# ICOC Fraction Transfer/Status Report ByDate: 12/27/2005, 1/1/2007, Batch: '6331348', User: \*ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us Ad	ccepting		Comments
6331348					
AC	CalcC	BockJ	12/19/2006 9:4	2:47	
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24
SC		BockJ	Prep1C	12/19/2006 9:42:47 AM	RICH-RC-5017 REVISION 5
SC		AshworthA	Prep2C	12/26/2006 8:16:28 PM	RICH-RC-5017 REVISION 4
SC		DAWKINSO	InCnt1	12/26/2006 8:31:19 PM	RICH-RD-0007 REVISION 5
SC		BlackCL	CalcC	12/27/2006 9:08:28 AM	RICH-RD-0007 REVISION 5
AC		AshworthA	12/26/2006 8:16	5:28	
AC		DAWKINSO	12/26/2006 8:31	1:19	
AC		BlackCL	12/27/2006 9:08	3:28	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 4 ICOCFractions v4.8.26 1/8/2007 4:12:08 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/8/2006, 1/13/2007, Batch: '6331352', User: 'ALL Order By DateTimeAccepting

Q Batch World	k Ord CurStat	us A	ccepting		Comments
6331352	***************************************		77-740-3744, <del>- 17-16-16-16-16-76-76-76-76-76-76-76-76-76-76-76-76-76</del>		
AC	CalcC	BostedD	12/20/2006 11:0	06:25	
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24
SC		BostedD	InPrep	12/20/2006 11:06:25 AM	RICHRC5025 REV3
SC		DAWKINSO	InCnt1	1/3/2007 3:13:54 PM	RICH-RD-0007 REVISION 5
SC		DAWKINSO	CalcC	1/3/2007 7:42:21 PM	RICH-RD-0007 REVISION 5
AC		DAWKINSO	1/3/2007 3:13:5	4 PM	
AC		DAWKINSO	1/3/2007 7:42:2	1 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt:3 ICOCFractions v4.8.26 1/8/2007 4:08:06 PM

### ICOC Fraction Transfer/Status Report ByDate: 1/8/2006, 1/13/2007, Batch: '6360197', User: 'ALL Order By DateTimeAccepting

Q Batch Wo	ork Ord CurStat	us A	ccepting		Comments
6360197		**************************************			
AC	CalcC	BostedD	1/3/2007 7:49:2	4 AM	
SC		bostedd	IsBatched	12/29/2006 8:53:53 AM	ICOC_RADCALC v4.8.26
SC		BostedD	InPrep	1/3/2007 7:49:24 AM	RICHRC5025 REV3
SC		DAWKINSO	InCnt1	1/3/2007 3:13:47 PM	RICH-RD-0007 REVISION 5
SC		BlackCL	CalcC	1/4/2007 8:01:03 AM	RICH-RD-0007 REVISION 5
AC .		DAWKINSO	1/3/2007 3:13:4	7 PM	
AC		BlackCL	1/4/2007 8:01:0	3 AM	

Page 1

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt:3 ICOCFractions v4.8.26 12/26/2006 3:06:46 PM

#### ICOC Fraction Transfer/Status Report ByDate: 12/26/2005, 12/31/2006, Batch: '6331340', User: \*ALL Order By DateTimeAccepting

Q Batch V	Vork Ord	CurStatus		Accepting		Comments
6331340		100 100 100 100 100 100 100 100 100 100				3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
AC		CalcC	BockJ	12/18/2006 12:	37:56	
SC -			wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24
SC			BockJ	InPrep	12/18/2006 12:37:56 PM	RICH-RC-5016 Revision 6
SC			BockJ	Prep1C	12/18/2006 12:42:58 PM	RICH-RC-5016 REVISION 6
SC			FABREM	Sep1C	12/22/2006 4:09:52 PM	RICH-RC-5078 REVISION 3
SC			DAWKINSO	InCnt1	12/22/2006 4:20:03 PM	RICH-RD-0001 REVISION 3
SC			StringerR	CalcC'	12/24/2006 11:23:16 AM	RICH-RD-0001 REVISION 3
AC			BockJ	12/18/2006 12:	42:58	
4 <i>C</i>			FABREM	12/22/2006 4:0	9:52	
4 <i>C</i>			DAWKINSO	12/22/2006 4:20	0:03	
AC			StringerR	12/24/2006 11::	23:16	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

Grp Rec Cnt:5 ICOCFractions v4.8.26 12/22/2006 2:14:46 PM

### ICOC Fraction Transfer/Status Report ByDate: 12/22/2005, 12/27/2006, Batch: '6331339', User: 'ALL Order By DateTimeAccepting

Batch Work Ord CurStatus A		Accepting		Comments				
6331339								
AC	CalcC	BockJ	12/18/2006 12:	45:41				
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24			
SC		BockJ	InPrep	12/18/2006 12:45:41 PM	RICH-RC-5016 Revision 6			
SC		BockJ	Prep1C	12/18/2006 12:56:11 PM	RICH-RC-5016 REVISION 6			
SC		FABREM	Sep1C	12/20/2006 4:32:30 PM	RICH-RC-5065 REVISION 5			
SC		DAWKINSO	InCnt1	12/20/2006 4:36:13 PM	RICH-RD-0001 REVISION 3			
SC		StringerR	CalcC	12/22/2006 1:14:45 PM	RICH-RD-0001 REVISION 3			
4C		BockJ	12/18/2006 12:	56:11				
4C		FABREM	12/20/2006 4:3	2:30				
4C		DAWKINSO	12/20/2006 4:3	6:13				
AC		StringerR	12/22/2006 1:1	4:45				

AC: Accepting Entry; SC: Status Change

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Richland Wa.

Page 1

Grp Rec Cnt:5 ICOCFractions v4.8.26 12/26/2006 2:44:42 PM

# ICOC Fraction Transfer/Status Report ByDate: 12/26/2005, 12/31/2006, Batch: '6331331', User: \*ALL Order By DateTimeAccepting

Q Batch Work	Ord CurStat	us A	ccepting		Comments			
6331331								
4 <i>C</i>	CalcC	McDowellD	12/14/2006 8:4	3:55				
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24			
SC .		McDowellD	InSep1	12/14/2006 8:43:55 AM	RICH-RC-5007 REVISION 6			
SC		McDowellD	Sep1C	12/15/2006 11:34:34 AM	RICH-RC-5007 REVISION 6			
SC .		StringerR	InCnt1	12/15/2006 11:39:32 AM	RICH-RD-0001 REVISION 3			
SC .		BlackCL	CalcC	12/18/2006 9:04:09 AM	RICH-RD-0001 REVISION 3			
IC		McDowellD	12/15/2006 11:	34:34				
1 <i>C</i>		StringerR	12/15/2006 11:	39:32				
AC		BlackCL	12/18/2006 9:04	4:09				

AC: Accepting Entry: SC: Status Change

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Page 1

Grp Rec Cnt:4 ICOCFractions v4.8.26 12/27/2006 2:34:40 PM

# ICOC Fraction Transfer/Status Report ByDate: 12/27/2005, 1/1/2007, Batch: '6331338', User: \*ALL Order By DateTimeAccepting

Batch Work	Ord CurState	us Ad	ccepting		Comments			
6331338								
4 <i>C</i>	CalcC	BockJ	12/19/2006 2:0	5:04				
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24			
SC		BockJ	Prep1C	12/19/2006 2:05:04 PM	RICH-RC-5016 REVISION 6			
SC		FABREM	Sep1C	12/22/2006 4:09:13 PM	RICH-RC-5069 REVISION 5			
SC .		DAWKINSO	InCnt1	12/22/2006 4:20:08 PM	RICH-RD-0001 REVISION 3			
SC		DAWKINSO	CalcC	12/26/2006 7:24:53 PM	RICH-RD-0001 REVISION 3			
С		FABREM	12/22/2006 4:0	9:13				
4 <i>C</i>		DAWKINSO	12/22/2006 4:2	0:08				
4 <i>C</i>		DAWKINSO	12/26/2006 7:2	4:53				

AC: Accepting Entry; SC: Status Change

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Richland Wa.

Page 1

Grp Rec Cnt: 4 ICOCFractions v4.8.26 1/8/2007 4:05:22 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/8/2006, 1/13/2007, Batch: '6331335', User: \*ALL Order By DateTimeAccepting

Q Batch Wor	k Ord CurStat	us A	ccepting		Comments		
6331335							
4 <i>C</i>	Cnt1C	BockJ	12/19/2006 7:1	9:17			
SC		wagarr	IsBatched	11/27/2006 1:29:23 PM	ICOC_RADCALC v4.8.24		
SC		BockJ	Prep1C	12/19/2006 7:19:17 AM	RICH-RC-5015 REVISION 4		
SC		AntonsonL	InSep1	12/26/2006 2:43:59 PM	RICH-RC-5015 REVISION 4		
SC .		AntonsonL	Sep1C	1/2/2007 3:03:56 PM	RICH-RC-5015 REVISION 4		
SC		NelsonT	Cnt1C	1/4/2007 9:17:47 AM	RICH-RC-5058 REV 7		
4 <i>C</i>		AntonsonL	12/26/2006 2:4	3:59			
4 <i>C</i>		AntonsonL	1/2/2007 3:03:5	6 PM			
4 <i>C</i>		NelsonT	1/4/2007 9:17:4	7 AM			

AC: Accepting Entry; SC: Status Change

STL Richland

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